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EVALUATION OF A LOW ASPECT RATIO SMALL AXIAL COMPRESSOR STAGE

FINAL REPORT

VOLUME II

by C. W. Sawyer, III

UNITED TECHNOLOGIES CORPORATION
PRATT & WHITNEY AIRCRAFT GROUP
GOVERNMENT PRODUCTS DIVISION

Prepared for
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NASA Lewis Research Center
Contract NAS3-19424

PRATT & WHITNEY AIRCRAFT GROUP
GOVERNMENT PRODUCTS DIVISION

P. O. Box 2691
West Palm Beach, Florida 33402

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National Aeronautics and Space Administration
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135

Attention: Dr. W.A. Rostafinski, M/S 5-9
Project Manager

Subject: Final Report
Volume I - CR - 135240
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Reference: Contract NAS3-19424
Evaluation of a Low Aspect Ratio Small
Axial Compressor Stage

Gentlemen:

Enclosed is (1) copy of the Final Report (P&WA Report No. FR-8499), which is submitted in accordance with Task III, Exhibit A of the referenced contract.

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Project Manager, Dr. Wojciech Rostafinski, Fluid System Components Division
NASA-Lewis Research Center, Cleveland, Ohio 44135

16. Abstract

A program was conducted to evaluate the effects of scaling, tip clearance, and IGV reset on the performance of a low aspect ratio compressor stage.

The stage design was obtained by scaling an existing single-stage compressor by a linear factor of 0.304 (corrected flowrate was scaled from 16.595 kg/sec to 1.537 kg/sec). The design objective was to maintain the meanline velocity field of the base machine in the smaller size. However, adjustments were made to account for predicted blockage differences and to chord lengths and airfoil edge radii to obtain reasonable blade geometries.

The meanline velocity diagrams of the base stage were not maintained at the scaled size. At design speed and flowrate the scaled stage achieved a pressure ratio of 1.423, adiabatic efficiency of 0.822, and surge margin of 18.5%. The corresponding performance parameters for the base stage were 1.480, 0.872, and 25.2%, respectively. The base stage demonstrated a peak efficiency at design speed of 0.872; the scaled stage achieved a level of 0.838.

When the scaled stage rotor and stator tip clearances were doubled (from about 1% to 2% blade height), the stage achieved a pressure ratio of 1.413, efficiency of 0.799, and surge margin of 16.0% at the design flowrate. The peak stage efficiency at design speed was 0.825 with the increased clearance.

Increased prewhirl lowered the stage pressure ratio as expected. Stage efficiency was maintained with ten degrees of increased prewhirl and then decreased substantially with ten additional degrees of reset.

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FOREWORD

This report was prepared by the Government Products Division of the Pratt & Whitney Aircraft Group of United Technologies Corporation, West Palm Beach, Florida. The report presents the design and performance of a scaled stage which was tested under Contract NAS3-19424, Evaluation of a Low Aspect Ratio Small Axial Compressor Stage. Dr. Wojciech Rostafinski, NASA-Lewis Research Center, Fluid System Components Division, was Project Manager.

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APPENDIX A
DATA SUPPLEMENT

Rotor, rotor-stator, and IGV-rotor-stator overall performance data, along with blade element performance data, are presented in this volume. These data are presented for each test configuration in order of decreasing equivalent rotor speed. For a given value of equivalent rotor speed the data are presented in order of decreasing equivalent flowrate.

All data are first presented in SI (metric) units and then repeated in U.S. Customary units.

The nomenclature used in the data listings is defined on the following page.

DATA SUPPLEMENT NOMENCLATURE

Parameter	*Description*	*S.I. Units*	*U.S. Units*
PERCENT OF SPAN	From outer diameter	%	%
DIAMETER	Diameter	meters	inches
P-TOTAL	Total Pressure	Newtons/sq cm	lbf/in^2
T-TOTAL	Total Temperature	°K	°R
P-STATIC	Static Pressure	Newtons/sq cm	lbf/in^2
BETABAR	Absolute Meridional Air Angle	degrees	degrees
EPSILON	Streamline Slope of Meridional Plane	degrees	degrees
K-BAR	Blockage Factor	—	—
V-BAR	Absolute Meridional Velocity	meters/sec	ft/sec
VZ-BAR	Absolute Meridional Axial Velocity	meters/sec	ft/sec
V-THET-BAR	Absolute Tangential Velocity	meters/sec	ft/sec
MACH-BAR	Absolute Meridional Mach Number	—	—
WCOR	Corrected Flowrate, $W\sqrt{\theta}/\delta$	kg/sec	lbm/sec
NCOR	Corrected Rotor speed, $N/\sqrt{\theta}$	radiams/sec	RPM
INC-M	Incidence Angle	degrees	degrees
DEVIATION	Deviation Angle	degrees	degrees
OMEGABAR	Absolute Total Pressure Loss Coefficient	—	—
TURNING	Turning Angle	degrees	degrees
U-WHEEL	Rotor Velocity	meters/sec	ft/sec
V-BAR-PR	Relative Meridional Velocity	meters/sec	ft/sec
BETABAR-PR	Relative Meridional Air Angle	degrees	degrees
V-THET-B-P	Relative Tangential Velocity	meters/sec	ft/sec
MACH-BAR-P	Relative Meridional Mach Number	—	—
D-FACTOR	Diffusion Factor	—	—
OMEGABAR-P	Relative Total Pressure Loss Coefficient	—	—
LOSS PAR	Loss Parameter	—	—
PT-RATIO	Total Pressure Ratio	—	—
EFF-AD	Adiabatic Efficiency	—	—
EFF-POLY	Polytropic Efficiency	—	—

APPENDIX B
BLADE ELEMENT AND OVERALL PERFORMANCE DATA — S. I. (METRIC) UNITS

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Table B-1. Scaled Stage Aerodynamic Design Point Blade Element Performance — SI (Metric) Units

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.532	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3603.3	P-STATIC	9.325	9.325	9.330	9.339	9.352	9.370	9.380	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.667	-4.343	-5.889	-7.364	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	116.479	116.428	116.085	115.397	114.386	113.050	112.270	
	VZ-BAR	116.479	116.428	116.085	115.397	114.386	113.050	112.270	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.346	0.346	0.345	0.343	0.340	0.336	0.333	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.077	10.087	10.104	10.103	10.106	10.102	10.096	10.100
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.087	9.090	9.097	9.105	9.116	9.128	9.135	
	BETABAR	10.592	10.664	11.167	11.738	12.160	13.164	13.944	
	EPSILON	-0.000	-0.904	-2.623	-4.267	-5.864	-7.369	-8.118	
	K-BAR	0.971	0.971	0.971	0.971	0.970	0.970	0.971	
	V-BAR	129.868	130.262	130.804	130.155	129.626	128.590	127.712	
	VZ-BAR	127.656	128.012	128.327	127.433	126.717	125.211	123.949	
	V-THET-BAR	23.872	24.104	25.332	26.478	27.304	29.284	30.776	
	MACH-BAR	0.367	0.388	0.390	0.388	0.386	0.383	0.381	
	INCID-H	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-2.5	-3.1	-4.0	-4.8	-5.7	-6.1	-6.0	
	OMEGABAR	0.067	0.055	0.034	0.036	0.033	0.038	0.048	
	TURNING	-10.6	-10.7	-11.2	-11.7	-12.2	-13.2	-13.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.077	10.087	10.104	10.103	10.106	10.102	10.096	10.100
WCOR= 1.537	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3603.3	P-STATIC	8.357	8.368	8.371	8.375	8.378	8.381	8.380	
	BETABAR	7.897	8.032	8.533	9.028	9.399	10.181	10.759	
	EPSILON	-1.170	-1.754	-3.030	-4.447	-5.772	-6.614	-6.637	
	K-BAR	0.953	0.953	0.953	0.953	0.953	0.953	0.953	
	V-BAR	173.611	173.675	174.078	173.815	173.766	173.482	173.237	
	VZ-BAR	171.965	171.972	172.151	171.661	171.433	170.751	170.191	
	V-THET-BAR	23.853	24.266	25.831	27.276	28.376	30.665	32.339	
	MACH-BAR	0.524	0.524	0.525	0.524	0.524	0.523	0.523	
	U-WHEEL	229.814	236.655	250.338	264.020	277.703	291.385	298.227	
	V-BAR-PR	268.313	273.284	282.914	292.432	302.579	311.659	315.692	
	BETABAR-PR	50.140	51.002	52.518	54.054	55.488	56.778	57.377	
	V-THET-R-P	-205.961	-212.389	-224.507	-236.745	-249.327	-260.720	-265.888	
	MACH-BAR-P	0.810	0.825	0.854	0.882	0.913	0.940	0.952	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	15.798	15.551	15.386	15.323	15.149	14.795	14.612	15.236
ROTOR	T-TOTAL	332.29	330.92	326.96	326.05	326.25	327.88	327.56	327.49
	P-STATIC	10.258	10.391	10.654	10.877	11.069	11.249	11.347	
PR = 1.5084	BETABAR	51.985	50.769	45.958	44.731	45.394	49.900	51.474	
TR = 1.1364	EPSILON	-2.885	-2.706	-3.145	-4.367	-5.551	-6.355	-6.418	
EFF-A = 0.9141	K-BAR	0.876	0.876	0.876	0.876	0.876	0.876	0.876	
EFF-P = 0.9182	V-BAR	278.368	268.936	255.874	247.174	237.075	222.699	214.164	
	VZ-BAR	171.437	170.078	177.866	175.597	166.481	143.446	133.396	
	V-THET-BAR	219.313	208.323	183.933	173.955	168.785	170.345	167.546	
	MACH-BAR	0.810	0.781	0.744	0.717	0.685	0.638	0.612	
	U-WHEEL	227.114	233.777	247.102	260.428	273.754	287.079	293.742	
	V-BAR-PR	171.514	172.023	188.785	195.746	196.817	184.946	183.630	
	BETABAR-PR	2.606	8.511	19.582	26.217	32.233	39.139	43.411	
	V-THET-R-P	-7.801	-25.453	-63.169	-86.473	-104.969	-116.734	-126.196	
	MACH-BAR-P	0.499	0.500	0.589	0.568	0.568	0.530	0.525	
	D-FACTOR	0.614	0.611	0.543	0.530	0.543	0.601	0.608	
	TURNING	47.5	42.5	33.0	27.8	23.3	17.6	14.0	
	INCID-H	-7.2	-5.1	-2.8	-1.5	-1.4	-1.9	-2.4	
	DEVIATION	14.5	12.3	10.9	8.5	7.0	7.9	9.6	
	OMEGABAR-P	0.136	0.138	0.056	0.038	0.068	0.153	0.169	
	LOSS PAR	0.047	0.049	0.020	0.014	0.024	0.052	0.055	
	PT-RATIO	1.568	1.542	1.523	1.517	1.499	1.465	1.447	1.5084
	EFF-AD	0.895	0.887	0.948	0.962	0.928	0.836	0.815	0.9141
	EFF-POLY	0.902	0.894	0.951	0.964	0.932	0.844	0.824	0.9182
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	15.798	15.557	15.387	15.325	15.157	14.801	14.612	15.236
	T-TOTAL	332.29	330.96	327.02	326.04	326.22	327.88	327.56	327.49
	P-STATIC	10.157	10.241	10.428	10.603	10.781	10.962	11.058	
	BETABAR	51.321	49.768	44.648	43.060	43.470	47.449	48.765	
	EPSILON	-0.113	-0.897	-2.783	-3.686	-4.960	-6.400	-7.979	
	K-BAR	0.855	0.855	0.855	0.855	0.855	0.855	0.855	
	V-BAR	281.332	273.593	262.903	255.780	246.515	232.707	224.404	
	VZ-BAR	175.822	176.696	187.025	186.884	178.908	157.368	147.915	
	V-THET-BAR	219.623	208.874	184.756	174.637	169.591	171.428	168.755	
	MACH-BAR	0.820	0.796	0.767	0.745	0.715	0.669	0.644	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	14.817	14.797	15.068	15.150	14.922	14.577	14.418	14.903
ROTOR PLUS STATOR	T-TOTAL	332.29	330.94	327.03	326.03	326.21	327.86	327.56	327.49
	P-STATIC	12.578	12.578	12.571	12.543	12.500	12.447	12.418	
PR = 1.4755	BETABAR	13.594	13.021	11.086	9.762	9.319	8.490	8.230	
TR = 1.1364	EPSILON	0.450	-0.239	-1.389	-2.522	-3.582	-4.764	-5.489	
EFF-A = 0.8615	K-BAR	0.873	0.873	0.873	0.873	0.873	0.873	0.873	
EFF-P = 0.8689	V-BAR	174.716	173.633	182.064	185.465	179.844	170.478	165.772	
	VZ-BAR	169.822	169.168	178.664	182.780	177.470	168.610	164.065	
	V-THET-BAR	41.066	39.120	35.000	31.446	29.123	25.170	23.729	
IGV,ROTOR,STATOR	MACH-BAR	0.489	0.487	0.515	0.526	0.509	0.480	0.467	
	EFF-POLY	0.768	0.803	0.897	0.934	0.904	0.893	0.895	
PR = 1.4709	INCID-H	-4.3	-2.9	-6.2	-7.5	-8.0	-6.2	-6.0	
TR = 1.1364	DEVIATION	12.8	11.7	10.2	9.4	9.9	10.5	11.2	
EFF-A = 0.8565	OMEGA-BAR	0.174	0.143	0.064	0.037	0.054	0.058	0.055	
EFF-P = 0.8620	LOSS PAR	0.060	0.051	0.024	0.015	0.022	0.025	0.024	
	D-FACTOR	0.604	0.591	0.526	0.500	0.510	0.544	0.551	
	TURNING	37.7	36.7	33.6	33.3	34.2	39.0	40.5	

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Table B-2. Base Stage Blade Element Performance — SI (Metric) Units

(Data Point No. 1)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.4191	0.4352	0.4675	0.4998	0.5321	0.5644	0.5805	
	P-TOTAL	9.926	10.136	10.143	10.143	10.142	10.139	9.967	10.132
WCOR=16.544	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 1096.5	P-STATIC	9.374	9.362	9.363	9.366	9.370	9.375	9.387	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.037	-2.794	-4.452	-5.997	-7.407	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	97.027	114.055	114.375	114.175	113.826	113.217	99.207	
	VZ-BAR	97.027	114.055	114.375	114.175	113.826	113.217	99.207	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.287	0.339	0.340	0.339	0.338	0.336	0.294	
IGV TRAILING EDGE	DIAMETER	0.4191	0.4342	0.4643	0.4945	0.5246	0.5548	0.5698	
	P-TOTAL	9.889	10.093	10.115	10.114	10.116	10.108	9.938	10.101
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.115	9.123	9.129	9.136	9.145	9.155	9.196	
	BETABAR	10.889	10.935	11.481	12.117	12.816	13.731	14.613	
	EPSILON	-0.000	-0.993	-2.731	-4.374	-5.906	-7.303	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	115.402	128.402	129.341	128.758	128.283	127.121	113.705	
	VZ-BAR	113.325	126.071	126.753	125.889	125.186	123.488	111.901	
	V-THET-BAR	21.799	24.357	25.743	27.027	28.019	30.172	29.190	
	MACH-BAR	0.343	0.383	0.386	0.384	0.382	0.379	0.344	
	INCID-M	22.1	22.8	24.1	25.3	26.3	27.5	28.1	
	DEVIATION	-2.1	-2.6	-3.1	-3.5	-4.1	-4.0	-3.7	
	OMEGABAR	0.070	0.057	0.035	0.037	0.034	0.040	0.051	
	TURNING	-10.9	-10.9	-11.5	-12.1	-12.6	-13.7	-14.6	
ROTOR LEADING EDGE	DIAMETER	0.4191	0.4314	0.4561	0.4808	0.5055	0.5302	0.5425	
	P-TOTAL	9.889	10.094	10.115	10.114	10.116	10.109	9.938	10.101
WCOR=16.545	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 1096.5	P-STATIC	8.390	8.387	8.380	8.377	8.380	8.388	8.396	
	BETABAR	7.688	8.169	8.678	9.193	9.621	10.488	10.698	
	EPSILON	-0.000	-0.821	-2.477	-4.275	-5.972	-7.102	-7.241	
	K-BAR	0.967	0.967	0.967	0.967	0.967	0.967	0.967	
	V-BAR	162.961	172.791	174.085	174.192	174.103	173.383	165.313	
	VZ-BAR	161.497	171.038	172.095	171.954	171.654	170.486	162.445	
	V-THET-BAR	21.860	24.553	26.242	27.829	29.097	31.560	30.660	
	MACH-BAR	0.490	0.521	0.525	0.526	0.525	0.523	0.498	
	U-WHEEL	229.772	236.539	250.075	263.610	277.146	290.681	297.449	
	W-BAR-PR	263.313	272.383	282.345	291.824	301.653	310.178	312.354	
	BETABAR-PR	52.170	51.102	52.444	53.896	55.316	56.657	58.003	
	W-THET-B-P	-207.973	-211.986	-223.832	-235.781	-246.049	-259.121	-266.790	
	MACH-BAR-P	0.792	0.822	0.852	0.881	0.910	0.936	0.940	
ROTOR TRAILING EDGE	DIAMETER	0.4191	0.4304	0.4531	0.4758	0.4985	0.5212	0.5325	
	P-TOTAL	15.921	15.752	15.496	15.386	15.162	14.737	14.519	15.304
ROTOR	T-TOTAL	334.08	331.76	326.88	326.04	325.69	327.24	328.09	327.47
------	P-STATIC	10.239	10.405	10.685	10.909	11.101	11.276	11.365	
PR = 1.5151	BETABAR	52.111	50.408	45.389	44.760	45.316	50.449	53.027	
TR = 1.1364	EPSILON	-0.000	-0.764	-2.240	-3.947	-5.567	-6.856	-7.367	
EFF-A = 0.9248	K-BAR	0.933	0.933	0.933	0.933	0.933	0.933	0.933	
EFF-P = 0.9265	V-BAR	281.995	272.886	257.249	247.594	236.125	220.017	211.053	
	VZ-BAR	173.181	173.893	180.648	175.806	166.045	140.104	126.936	
	V-THET-BAR	222.552	210.288	183.137	174.341	167.878	169.629	166.614	
	MACH-BAR	0.820	0.793	0.748	0.718	0.682	0.630	0.602	
	U-WHEEL	229.772	235.989	248.425	260.860	273.296	285.731	291.949	
	W-BAR-PR	173.331	175.837	192.118	195.949	196.688	181.478	176.987	
	BETABAR-PR	2.387	8.396	19.881	26.203	32.412	39.054	44.176	
	W-THET-B-P	-7.220	-25.701	-65.288	-80.519	-105.414	-116.102	-123.335	
	MACH-BAR-P	0.504	0.511	0.559	0.569	0.588	0.521	0.505	
	D-FACTOR	0.608	0.600	0.580	0.529	0.546	0.606	0.629	
	TURNING	49.8	42.7	32.6	27.7	22.9	17.0	14.5	
	INCID-M	-5.4	-5.1	-2.8	-1.6	-1.5	-1.9	-0.4	
	DEVIATION	14.6	12.5	11.2	8.1	7.0	8.1	9.6	
	OMEGABAR-P	0.119	0.131	0.037	0.031	0.055	0.146	0.163	
	LOSS PAR	0.042	0.047	0.013	0.011	0.020	0.049	0.055	
	PT-RATIO	1.610	1.580	1.532	1.521	1.499	1.460	1.461	1.5151
	EFF-AD	0.915	0.896	0.965	0.969	0.941	0.842	0.826	0.9248
	EFF-POLY	0.920	0.902	0.967	0.971	0.944	0.850	0.835	0.9285
STATOR LEADING EDGE	DIAMETER	0.4191	0.4300	0.4519	0.4737	0.4956	0.5174	0.5283	
	P-TOTAL	15.921	15.755	15.501	15.390	15.173	14.745	14.519	15.304
	T-TOTAL	334.08	331.81	326.97	326.04	325.67	327.21	328.09	327.47
	P-STATIC	10.047	10.196	10.451	10.653	10.836	10.979	11.041	
	BETABAR	50.698	48.985	44.060	43.208	43.519	47.800	49.742	
	EPSILON	-0.000	-0.734	-2.299	-3.858	-5.287	-6.672	-7.358	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	287.601	279.170	264.498	255.609	244.933	230.480	222.701	
	VZ-BAR	182.168	183.184	190.055	186.306	177.612	154.820	143.917	
	V-THET-BAR	222.552	210.646	183.938	175.003	168.660	170.735	169.951	
	MACH-BAR	0.838	0.813	0.772	0.744	0.710	0.663	0.638	
STATOR TRAILING EDGE	DIAMETER	0.4191	0.4289	0.4485	0.4681	0.4877	0.5073	0.5171	
	P-TOTAL	14.924	15.017	15.215	15.245	14.969	14.560	14.349	14.997
ROTOR PLUS STATOR	T-TOTAL	334.08	331.80	326.99	326.04	325.67	327.17	328.09	327.47
----------	P-STATIC	12.695	12.699	12.696	12.674	12.636	12.588	12.563	
PR = 1.4847	BETABAR	13.441	12.256	9.747	9.766	9.871	9.151	8.780	
TR = 1.1364	EPSILON	-0.000	-0.649	-1.852	-3.010	-4.177	-5.465	-6.309	
EFF-A = 0.8764	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8831	V-BAR	174.104	176.544	181.958	183.490	175.862	163.604	156.736	
	VZ-BAR	169.335	172.518	179.331	180.832	173.258	161.522	154.899	
	V-THET-BAR	40.470	37.478	30.801	31.123	30.148	26.018	23.924	
IGV,ROTOR,STATOR	MACH-BAR	0.486	0.495	0.515	0.520	0.498	0.461	0.440	
----------	EFF-POLY	0.782	0.819	0.910	0.947	0.917	0.916	0.915	
PR = 1.4801	INCID-M	-4.9	-3.6	-0.8	-7.3	-8.1	-8.1	-4.2	
TR = 1.1364	DEVIATION	12.6	10.9	8.9	9.4	10.6	11.3	11.9	
EFF-A = 0.8717	OMEGA-BAR	0.170	0.133	0.057	0.031	0.047	0.049	0.049	
EFF-P = 0.8763	LOSS PAR	0.059	0.047	0.021	0.012	0.019	0.021	0.021	
	D-FACTOR	0.619	0.594	0.534	0.509	0.521	0.567	0.591	
	TURNING	37.3	36.7	34.3	33.4	33.6	38.6	41.0	

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Table B-2. Base Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 2)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.4191	0.4352	0.4675	0.4998	0.5321	0.5644	0.5805	
	P-TOTAL	9.919	10.129	10.149	10.153	10.135	10.136	9.965	10.132
WCOR=17.434	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 1093.9	P-STATIC	9.280	9.269	9.269	9.272	9.277	9.282	9.294	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.049	-2.800	-4.449	-5.981	-7.396	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	104.470	120.398	121.708	121.741	120.256	119.874	106.788	
	VZ-BAR	104.470	120.398	121.708	121.741	120.256	119.874	106.788	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.310	0.358	0.362	0.362	0.358	0.357	0.317	
IGV TRAILING EDGE	DIAMETER	0.4191	0.4342	0.4643	0.4945	0.5246	0.5548	0.5698	
	P-TOTAL	9.876	10.081	10.109	10.112	10.103	10.094	9.924	10.092
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	8.985	8.993	9.000	9.008	9.018	9.029	9.031	
	BETABAR	10.819	10.855	11.344	11.991	12.567	11.871	11.604	
	EPSILON	-0.000	-1.003	-2.737	-4.367	-5.888	-7.294	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	124.177	136.303	137.519	137.141	136.008	134.751	124.071	
	VZ-BAR	121.970	133.864	134.832	134.149	132.749	131.869	121.535	
	V-THET-BAR	23.309	25.670	27.048	28.491	29.593	27.721	24.956	
	MACH-BAR	0.370	0.407	0.411	0.410	0.406	0.402	0.369	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-2.1	-2.6	-3.2	-3.8	-4.1	-5.9	-6.7	
	OMEGABAR	0.068	0.056	0.045	0.046	0.038	0.049	0.061	
	TURNING	-10.6	-10.9	-11.3	-12.0	-12.6	-11.9	-11.8	
ROTOR LEADING EDGE	DIAMETER	0.4191	0.4314	0.4561	0.4808	0.5055	0.5302	0.5425	
	P-TOTAL	9.876	10.082	10.109	10.112	10.103	10.095	9.924	10.092
WCOR=17.503	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 1093.9	P-STATIC	8.093	8.086	8.077	8.073	8.076	8.084	8.087	
	BETABAR	7.485	7.909	8.362	8.885	9.335	8.848	8.512	
	EPSILON	-0.000	-0.840	-2.502	-4.275	-5.941	-7.066	-7.241	
	K-BAR	0.959	0.959	0.959	0.959	0.959	0.959	0.959	
	V-BAR	178.939	188.019	189.602	189.928	189.412	188.683	181.819	
	VZ-BAR	177.414	186.230	187.587	187.649	186.904	186.439	179.415	
	V-THET-BAR	25.309	25.873	27.573	29.336	30.723	29.014	26.212	
	MACH-BAR	0.541	0.570	0.575	0.576	0.575	0.572	0.548	
	U-WHEEL	229.230	235.981	249.485	262.989	276.492	289.996	296.748	
	V-BAR-PR	271.867	280.762	290.577	299.677	308.766	320.737	324.622	
	BETABAR-PR	49.253	48.447	49.791	51.231	52.747	54.458	56.448	
	V-THET-B-P	-205.921	-210.109	-221.912	-233.653	-245.769	-260.981	-270.536	
	MACH-BAR-P	0.822	0.851	0.881	0.909	0.937	0.973	0.982	
ROTOR TRAILING EDGE	DIAMETER	0.4191	0.4304	0.4531	0.4758	0.4985	0.5212	0.5325	
	P-TOTAL	15.253	14.985	14.637	14.436	14.164	13.845	13.399	14.358
ROTOR	I-TOTAL	330.49	328.58	323.92	322.81	321.41	321.48	321.59	323.55
	P-STATIC	9.364	9.505	9.744	9.936	10.102	10.242	10.313	
PR = 1.4228	BETABAR	45.269	44.163	40.511	39.734	39.410	40.592	41.144	
TR = 1.1268	EPSILON	-0.000	-0.789	-2.218	-3.910	-5.535	-6.822	-7.367	
EFF-A = 0.8614	K-BAR	0.917	0.917	0.917	0.917	0.917	0.917	0.917	
EFF-P = 0.8698	V-BAR	293.923	283.643	267.233	256.159	242.348	225.413	215.776	
	VZ-BAR	206.852	203.460	203.706	196.991	187.245	171.173	162.492	
	V-THET-BAR	208.809	197.620	172.888	163.744	153.857	140.865	141.969	
	MACH-BAR	0.865	0.833	0.785	0.750	0.707	0.653	0.623	
	U-WHEEL	229.230	235.981	249.485	262.989	276.492	289.996	296.748	
	V-BAR-PR	207.862	206.985	217.142	219.305	221.756	220.133	220.662	
	BETABAR-PR	5.638	10.525	20.196	26.099	32.392	38.455	42.575	
	V-THET-B-P	-20.421	-37.812	-74.951	-96.560	-118.794	-138.392	-149.291	
	MACH-BAR-P	0.611	0.608	0.638	0.642	0.647	0.638	0.637	
	D-FACTOR	0.474	0.483	0.442	0.447	0.449	0.474	0.478	
	TURNING	43.6	37.9	29.0	25.1	20.4	15.5	13.9	
	INCID-M	-6.4	-7.8	-9.5	-9.3	-9.1	-9.1	-7.6	
	DEVIATION	18.0	14.6	11.5	8.0	7.0	7.4	8.6	
	OMEGABAR-P	0.125	0.156	0.096	0.096	0.107	0.166	0.172	
	LOSS PAR	0.043	0.055	0.034	0.034	0.038	0.057	0.057	
	PT-RATIO	1.544	1.486	1.448	1.426	1.396	1.354	1.350	1.4228
	EFF-AD	0.900	0.859	0.900	0.891	0.867	0.782	0.776	0.8614
	EFF-POLY	0.906	0.866	0.904	0.896	0.873	0.791	0.782	0.8698
STATOR LEADING EDGE	DIAMETER	0.4191	0.4360	0.4519	0.4737	0.4956	0.5174	0.5283	
	P-TOTAL	15.253	14.990	14.643	14.443	14.118	13.654	13.399	14.358
	I-TOTAL	330.49	328.42	324.01	322.82	321.44	321.47	321.59	323.55
	P-STATIC	8.874	8.992	9.195	9.367	9.524	9.643	9.682	
	BETABAR	42.619	41.393	37.593	36.767	36.214	36.720	36.726	
	EPSILON	-0.000	-0.694	-2.241	-3.818	-5.185	-6.675	-7.358	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	308.378	299.360	284.638	274.697	262.057	247.150	239.495	
	VZ-BAR	226.927	224.563	225.526	220.054	211.431	198.107	191.796	
	V-THET-BAR	208.809	197.948	173.646	164.422	154.825	142.773	143.095	
	MACH-BAR	0.914	0.886	0.843	0.811	0.771	0.723	0.697	
STATOR TRAILING EDGE	DIAMETER	0.4191	0.4269	0.4485	0.4681	0.4877	0.5073	0.5171	
	P-TOTAL	12.865	13.078	13.534	13.642	13.283	12.896	12.703	13.287
ROTOR PLUS STATOR	T-TOTAL	330.49	328.45	324.06	322.83	321.47	321.47	321.59	323.55
	P-STATIC	9.215	9.226	9.232	9.209	9.160	9.099	9.067	
PR = 1.3103	BETABAR	13.446	14.163	11.489	11.265	11.395	12.008	11.762	
TR = 1.1268	EPSILON	-0.000	-0.616	-1.797	-2.966	-4.101	-5.467	-6.309	
EFF-A = 0.8657	K-BAR	0.885	0.885	0.885	0.885	0.885	0.885	0.885	
EFF-P = 0.8784	V-BAR	245.722	250.205	259.611	262.447	255.063	247.476	243.585	
	VZ-BAR	230.847	242.598	254.467	257.391	250.036	242.061	238.471	
	V-THET-BAR	65.442	61.212	51.706	51.266	50.391	51.486	49.602	
IGV,ROTOR,STATOR	MACH-BAR	0.707	0.724	0.760	0.771	0.746	0.724	0.711	
	EFF-POLY	0.179	0.158	0.048	-0.425	-1.748	58.348	5.336	
PR = 1.3113	INCID-M	-13.0	-11.2	-13.2	-13.7	-15.4	-17.2	-17.2	
TR = 1.1268	DEVIATION	14.6	12.8	10.6	10.9	12.1	14.1	14.9	
EFF-A = 0.8569	OMEGA-BAR	0.375	0.319	0.204	0.158	0.182	0.189	0.187	
EFF-P = 0.8686	LOSS PAR	0.128	0.112	0.076	0.062	0.074	0.080	0.081	
	D-FACTOR	0.368	0.331	0.253	0.211	0.196	0.172	0.159	
	TURNING	27.2	27.2	26.1	25.5	24.8	24.7	25.0	

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Table B-2. Base Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 3)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.4191	0.4352	0.4675	0.4998	0.5321	0.5644	0.5805	
	P-TOTAL	9.845	10.061	10.148	10.172	10.153	10.151	9.978	10.131
WCOR=15.348	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 1100.3	P-STATIC	9.497	9.479	9.476	9.477	9.480	9.484	9.493	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.284	-3.091	-4.617	-6.078	-7.416	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	76.896	98.818	105.898	107.693	106.008	105.464	90.464	
	VZ-BAR	76.896	98.818	105.898	107.693	106.008	105.464	90.464	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.227	0.293	0.314	0.320	0.315	0.313	0.268	
IGV TRAILING EDGE	DIAMETER	0.4191	0.4342	0.4643	0.4945	0.5246	0.5548	0.5698	
	P-TOTAL	9.813	10.017	10.112	10.139	10.129	10.116	9.945	10.098
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.240	9.256	9.270	9.277	9.283	9.290	9.280	
	BETABAR	10.688	10.870	11.578	12.216	12.577	13.839	14.727	
	EPSILON	-0.000	-1.160	-2.948	-4.497	-5.959	-7.314	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	99.270	113.496	119.150	120.458	119.364	117.977	106.427	
	VZ-BAR	97.548	111.460	116.726	117.730	116.500	114.553	102.931	
	V-THET-BAR	18.411	21.404	23.914	24.496	25.992	28.218	27.054	
	MACH-BAR	0.294	0.337	0.354	0.358	0.355	0.351	0.316	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-2.2	-2.6	-3.0	-3.4	-4.1	-3.9	-3.5	
	OMEGABAR	0.093	0.075	0.054	0.047	0.046	0.052	0.069	
	TURNING	-10.7	-10.9	-11.6	-12.2	-12.6	-13.8	-14.7	
ROTOR LEADING EDGE	DIAMETER	0.4191	0.4314	0.4561	0.4808	0.5055	0.5302	0.5425	
	P-TOTAL	9.813	10.019	10.114	10.139	10.129	10.117	9.945	10.098
WCOR=15.399	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 1100.3	P-STATIC	8.632	8.628	8.623	8.621	8.625	8.634	8.636	
	BETABAR	7.331	7.991	8.762	9.336	9.640	10.020	10.830	
	EPSILON	-0.000	-0.886	-2.607	-4.494	-6.320	-7.407	-7.741	
	K-BAR	0.955	0.955	0.955	0.955	0.955	0.955	0.955	
	V-BAR	144.294	156.537	160.583	161.940	161.207	160.113	151.241	
	VZ-BAR	143.115	154.027	158.708	159.800	158.931	157.370	148.548	
	V-THET-BAR	18.411	21.623	24.463	26.272	26.995	29.508	28.916	
	MACH-BAR	0.432	0.467	0.483	0.487	0.485	0.481	0.453	
	U-WHEEL	230.367	237.357	250.939	264.522	278.104	291.687	298.478	
	V-BAR-PR	255.914	285.076	276.551	286.879	297.179	305.784	308.220	
	BETABAR-PR	55.997	54.474	54.978	56.149	57.669	59.026	61.187	
	V-THET-B-P	-212.156	-215.734	-226.477	-236.250	-251.109	-262.178	-270.062	
	MACH-BAR-P	0.766	0.796	0.831	0.863	0.893	0.919	0.924	
ROTOR TRAILING EDGE	DIAMETER	0.4191	0.4304	0.4531	0.4758	0.4985	0.5212	0.5325	
	P-TOTAL	16.167	16.048	15.895	15.819	15.570	15.073	14.784	15.688
ROTOR	T-TOTAL	336.19	333.84	328.90	327.48	327.45	329.32	330.33	329.30
PR = 1.5537	P-STATIC	10.632	10.812	11.117	11.353	11.546	11.720	11.811	
TR = 1.1427	BETABAR	55.560	53.691	48.299	46.810	47.796	54.512	58.736	
EFF-A = 0.9410	EPSILON	-0.000	-0.922	-2.481	-4.073	-5.701	-6.936	-7.307	
EFF-P = 0.9437	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	276.073	267.517	253.288	243.888	232.071	214.211	203.028	
	VZ-BAR	156.131	158.376	168.481	166.922	155.902	124.378	105.367	
	V-THET-BAR	227.683	215.574	189.113	177.816	171.894	174.355	173.545	
	MACH-BAR	0.797	0.773	0.733	0.705	0.668	0.610	0.575	
	U-WHEEL	230.566	236.805	249.284	261.762	274.240	286.719	292.958	
	V-BAR-PR	156.158	159.863	178.936	186.843	186.510	167.678	159.653	
	BETABAR-PR	1.058	7.614	19.641	26.696	33.290	42.119	48.576	
	V-THET-B-P	-2.884	-21.231	-60.176	-83.946	-102.346	-112.364	-119.413	
	MACH-BAR-P	0.451	0.462	0.518	0.540	0.537	0.478	0.451	
	D-FACTOR	0.676	0.660	0.579	0.560	0.577	0.657	0.692	
	TURNING	54.9	46.9	35.3	29.5	24.4	16.9	12.6	
	INCID-M	-1.6	-1.8	-0.3	0.6	0.9	0.5	2.1	
	DEVIATION	13.5	11.7	11.0	8.6	7.9	10.6	14.0	
	OMEGABAR-P	0.123	0.126	0.030	0.007	0.042	0.148	0.181	
	LOSS PAR	0.043	0.045	0.011	0.003	0.015	0.048	0.064	
	PT-RATIO	1.048	1.602	1.571	1.560	1.537	1.494	1.487	1.5537
	EFF-AD	0.920	0.909	0.974	0.993	0.958	0.851	0.820	0.9410
	EFF-POLY	0.926	0.915	0.976	0.994	0.961	0.859	0.829	0.9437
STATOR LEADING EDGE	DIAMETER	0.4191	0.4300	0.4519	0.4737	0.4956	0.5174	0.5283	
	P-TOTAL	16.167	16.049	15.897	15.822	15.585	15.089	14.784	15.688
	T-TOTAL	336.19	333.87	328.98	327.49	327.40	329.28	330.33	329.30
	P-STATIC	10.353	10.509	10.776	11.010	11.226	11.409	11.489	
	BETABAR	53.245	51.343	46.075	44.571	45.353	51.143	54.543	
	EPSILON	-0.000	-0.964	-2.591	-4.092	-5.360	-6.499	-7.358	
	K-BAR	0.874	0.874	0.874	0.874	0.874	0.874	0.874	
	V-BAR	284.178	276.439	263.607	254.438	242.588	225.303	214.747	
	VZ-BAR	170.052	172.652	182.852	181.256	170.478	141.362	124.573	
	V-THET-BAR	227.683	215.868	189.864	178.563	172.580	175.410	174.922	
	MACH-BAR	0.824	0.802	0.766	0.739	0.701	0.645	0.611	
STATOR TRAILING EDGE	DIAMETER	0.4191	0.4289	0.4485	0.4681	0.4877	0.5073	0.5171	
	P-TOTAL	15.288	15.363	15.529	15.398	15.131	14.742	14.541	15.229
ROTOR PLUS STATOR	T-TOTAL	336.19	333.79	328.89	327.49	327.36	329.16	330.33	329.30
	P-STATIC	13.613	13.017	13.014	12.991	12.957	12.915	12.892	
PR = 1.5081	BETABAR	14.608	13.772	12.031	10.948	10.227	8.019	6.838	
TR = 1.1427	EPSILON	-0.000	-0.740	-1.980	-3.015	-3.984	-5.295	-6.309	
EFF-A = 0.8727	K-BAR	0.884	0.884	0.884	0.884	0.884	0.884	0.884	
EFF-P = 0.8799	V-BAR	174.321	176.666	180.357	176.663	168.860	156.036	149.746	
	VZ-BAR	108.086	111.004	120.395	123.389	116.177	105.104	98.080	
	V-THET-BAR	43.964	41.914	37.591	33.541	29.982	21.853	17.837	
IGV,ROTOR,STATOR	MACH-BAR	0.485	0.492	0.509	0.499	0.476	0.439	0.418	
	EFF-POLY	0.802	0.832	0.892	0.857	0.829	0.847	0.873	
PR = 1.5031	INCID-M	-2.3	-1.3	-4.7	-5.9	-6.2	-2.7	0.6	
TR = 1.1427	DEVIATION	13.8	12.4	11.2	10.6	10.9	10.1	10.0	
EFF-A = 0.8869	OMEGA-BAR	0.151	0.124	0.072	0.088	0.104	0.094	0.074	
EFF-P = 0.8728	LOSS PAR	0.052	0.044	0.027	0.034	0.043	0.040	0.032	
	D-FACTOR	0.616	0.592	0.537	0.535	0.552	0.605	0.631	
	TURNING	38.6	37.6	34.0	33.6	35.1	43.1	47.7	

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Table B-2. Base Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 4)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.4191	0.4352	0.4675	0.4998	0.5321	0.5644	0.5805	
	P-TOTAL	9.921	10.134	10.141	10.148	10.132	10.144	9.971	10.131
WCOR=13.750	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 1097.2	P-STATIC	9.627	9.614	9.614	9.615	9.618	9.621	9.631	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.134	-2.857	-4.475	-5.987	-7.380	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	70.398	93.004	93.645	94.142	92.425	93.229	75.553	
	VZ-BAR	70.398	93.004	93.645	94.142	92.425	93.229	75.553	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.208	0.275	0.277	0.279	0.274	0.276	0.223	
IGV TRAILING EDGE	DIAMETER	0.4191	0.4342	0.4643	0.4945	0.5246	0.5548	0.5698	
	P-TOTAL	9.890	10.096	10.119	10.118	10.115	10.110	9.940	10.104
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.435	9.453	9.458	9.462	9.467	9.473	9.462	
	BETABAR	10.289	10.447	11.201	11.925	12.206	13.208	14.020	
	EPSILON	-0.000	-1.053	-2.777	-4.392	-5.904	-7.297	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	88.056	103.811	105.205	104.831	104.163	103.334	89.946	
	VZ-BAR	86.640	102.090	103.201	102.568	101.808	103.601	87.207	
	V-THET-BAR	15.729	18.825	20.435	21.661	22.022	23.609	21.791	
	MACH-BAR	0.260	0.308	0.312	0.311	0.309	0.306	0.266	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	26.1	
	DEVIATION	-2.7	-3.1	-3.4	-3.7	-4.5	-4.5	-4.2	
	OMEGABAR	0.105	0.074	0.042	0.056	0.032	0.064	0.093	
	TURNING	-10.3	-10.4	-11.2	-11.9	-12.2	-13.2	-14.0	
ROTOR LEADING EDGE	DIAMETER	0.4191	0.4314	0.4561	0.4808	0.5055	0.5302	0.5425	
	P-TOTAL	9.890	10.097	10.119	10.119	10.115	10.112	9.940	10.104
WCOR=13.787	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 1097.2	P-STATIC	8.952	8.949	8.945	8.944	8.950	8.957	8.959	
	BETABAR	7.087	7.796	8.465	9.062	9.326	10.130	10.133	
	EPSILON	-0.000	-0.911	-2.721	-4.888	-6.993	-7.947	-7.241	
	K-BAR	0.946	0.946	0.946	0.946	0.946	0.946	0.946	
	V-BAR	127.482	140.069	141.561	141.598	141.076	140.377	130.095	
	VZ-BAR	126.508	138.774	140.018	139.831	139.211	138.189	128.066	
	V-THET-BAR	15.769	19.001	20.839	22.302	22.861	24.688	22.888	
	MACH-BAR	0.380	0.419	0.423	0.423	0.422	0.420	0.388	
	U-WHEEL	229.928	236.099	250.244	263.789	277.334	290.878	297.651	
	V-BAR-PR	248.768	258.169	268.761	279.051	290.064	299.925	303.143	
	BETABAR-PR	59.434	57.434	58.601	59.927	61.318	62.564	63.010	
	V-THET-B-P	-214.199	-217.699	-229.405	-241.487	-254.473	-266.190	-274.763	
	MACH-BAR-P	0.741	0.772	0.804	0.834	0.867	0.897	0.904	
ROTOR TRAILING EDGE	DIAMETER	0.4191	0.4304	0.4531	0.4758	0.4985	0.5212	0.5325	
	P-TOTAL	16.410	16.291	16.207	16.233	15.843	15.328	15.273	16.014
ROTOR	T-TOTAL	336.62	334.77	330.81	330.57	331.10	334.06	335.53	332.13
-----	P-STATIC	10.974	11.155	11.464	11.710	11.912	12.107	12.211	
PR = 1.5850	BETABAR	57.068	55.884	50.705	49.959	52.868	63.040	65.703	
TR = 1.1526	EPSILON	-0.000	-0.876	-2.264	-4.065	-5.812	-6.910	-7.367	
EFF-A = 0.9231	K-BAR	0.892	0.892	0.892	0.892	0.892	0.892	0.892	
EFF-P = 0.9267	V-BAR	270.992	262.632	250.187	243.249	228.120	209.138	204.316	
	VZ-BAR	147.323	147.288	158.440	156.451	137.712	94.838	84.071	
	V-THET-BAR	227.448	217.433	193.619	186.227	181.850	180.322	180.220	
	MACH-BAR	0.780	0.756	0.721	0.699	0.651	0.590	0.574	
	U-WHEEL	229.928	236.149	248.593	261.037	273.481	285.925	292.148	
	V-BAR-PR	147.344	148.517	167.714	173.466	165.429	137.634	139.235	
	BETABAR-PR	0.964	7.229	19.130	25.550	33.648	46.450	51.564	
	V-THET-B-P	-2.479	-18.716	-54.974	-74.810	-91.631	-99.603	-105.927	
	MACH-BAR-P	0.424	0.427	0.483	0.499	0.472	0.389	0.380	
	D-FACTOR	0.705	0.701	0.620	0.614	0.660	0.776	0.792	
	TURNING	58.5	50.3	39.5	34.4	27.7	16.1	13.4	
	INCID-M	1.8	1.2	3.3	4.4	4.5	4.0	6.6	
	DEVIATION	13.4	11.3	10.4	7.5	8.3	14.9	17.0	
	OMEGABAR-P	0.121	0.139	0.033	0.020	0.094	0.223	0.234	
	LOSS PAR	0.042	0.050	0.012	0.007	0.033	0.068	0.065	
	PT-RATIO	1.659	1.613	1.602	1.604	1.564	1.521	1.537	1.5850
	EFF-AD	0.925	0.905	0.974	0.983	0.915	0.800	0.794	0.9231
	EFF-POLY	0.931	0.911	0.976	0.984	0.920	0.811	0.806	0.9267
STATOR LEADING EDGE	DIAMETER	0.4191	0.4300	0.4519	0.4737	0.4956	0.5174	0.5283	
	P-TOTAL	16.410	16.292	16.208	16.239	15.871	15.339	15.273	16.014
	T-TOTAL	336.62	334.79	330.89	330.55	331.04	333.94	335.53	332.13
	P-STATIC	10.707	10.869	11.155	11.409	11.645	11.854	11.951	
	BETABAR	54.702	53.452	48.532	47.774	50.280	59.139	61.490	
	EPSILON	-0.000	-0.872	-2.528	-3.874	-5.131	-6.462	-7.358	
	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
	V-BAR	278.682	271.026	259.436	252.388	237.251	218.239	213.599	
	VZ-BAR	161.031	161.379	171.790	169.619	151.620	111.960	101.953	
	V-THET-BAR	227.449	217.731	194.401	186.893	182.462	187.278	187.697	
	MACH-BAR	0.805	0.783	0.750	0.728	0.680	0.618	0.602	
STATOR TRAILING EDGE	DIAMETER	0.4191	0.4289	0.4485	0.4681	0.4877	0.5073	0.5171	
	P-TOTAL	15.399	15.429	15.495	15.441	15.165	14.974	14.882	15.297
ROTOR PLUS STATOR	T-TOTAL	336.62	334.80	331.00	330.50	330.86	333.55	335.53	332.13
----------	P-STATIC	13.489	13.495	13.495	13.480	13.451	13.421	13.406	
PR = 1.3140	BETABAR	17.385	15.771	12.500	7.639	5.479	8.716	10.586	
TR = 1.1526	EPSILON	-0.000	-0.618	-1.635	-2.462	-3.325	-4.845	-6.309	
EFF-A = 0.8246	K-BAR	0.862	0.862	0.862	0.862	0.862	0.862	0.862	
EFF-P = 0.8346	V-BAR	158.473	158.911	160.448	158.992	149.835	143.648	140.797	
	VZ-BAR	151.234	152.926	156.641	157.576	148.952	141.989	138.400	
	V-THET-BAR	47.351	43.189	34.725	21.187	14.288	21.767	25.866	
IGV,ROTOR,STATOR	MACH-BAR	0.439	0.442	0.449	0.445	0.418	0.399	0.389	
----------	EFF-POLY	0.783	0.798	0.804	0.769	0.767	0.860	0.814	
PR = 1.5099	INCID-M	-0.9	0.8	-2.3	-2.7	-1.3	5.3	7.6	
TR = 1.1526	DEVIATION	16.6	14.4	11.6	7.3	6.2	10.8	13.7	
EFF-A = 0.8202	OMEGA-BAR	0.177	0.159	0.141	0.165	0.167	0.105	0.118	
EFF-P = 0.8291	LOSS PAR	0.060	0.056	0.053	0.065	0.069	0.045	0.051	
	D-FACTOR	0.661	0.648	0.619	0.634	0.669	0.675	0.681	
	TURNING	37.3	37.7	36.0	40.1	44.8	50.4	50.9	

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Table B-2. Base Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 5)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.4191	0.4352	0.4675	0.4998	0.5321	0.5644	0.5805	
	P-TOTAL	9.916	10.126	10.147	10.144	10.153	10.128	9.956	10.131
WCOR=16.226	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 931.7	P-STATIC	9.406	9.394	9.394	9.396	9.400	9.405	9.417	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.037	-2.744	-4.452	-5.997	-7.407	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	93.173	110.833	112.300	111.902	112.349	110.087	95.510	
	VZ-BAR	93.173	110.833	112.300	111.902	112.349	110.087	95.510	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.276	0.329	0.334	0.332	0.334	0.327	0.283	
IGV TRAILING EDGE	DIAMETER	0.4191	0.4342	0.4643	0.4945	0.5246	0.5548	0.5698	
	P-TOTAL	9.876	10.081	10.111	10.115	10.126	10.103	9.931	10.099
	T-TOTAL	288.17	286.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.154	9.161	9.167	9.174	9.182	9.192	9.193	
	BETABAR	9.769	10.416	12.242	11.665	12.438	14.544	15.948	
	EPSILON	-0.000	-0.993	-2.731	-4.374	-5.906	-7.303	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	111.462	124.967	126.468	126.182	126.337	124.182	112.387	
	VZ-BAR	109.846	122.907	123.591	123.576	125.372	120.202	108.062	
	V-THET-BAR	18.913	22.595	26.816	25.513	27.209	31.182	30.879	
	MACH-BAR	0.331	0.372	0.377	0.376	0.376	0.370	0.334	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-3.2	-3.1	-2.3	-4.0	-4.3	-3.2	-2.3	
	OMEGABAR	0.079	0.062	0.047	0.039	0.036	0.036	0.045	
	TURNING	-9.8	-10.4	-12.2	-11.7	-12.4	-14.5	-15.9	
ROTOR LEADING EDGE	DIAMETER	0.4191	0.4314	0.4561	0.4808	0.5055	0.5302	0.5425	
	P-TOTAL	9.876	10.082	10.111	10.115	10.126	10.103	9.931	10.099
WCOR=16.278	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 931.7	P-STATIC	8.444	8.440	8.434	8.431	8.434	8.442	8.445	
	BETABAR	6.824	7.741	9.268	8.810	9.480	11.047	11.558	
	EPSILON	-0.000	-0.821	-2.477	-4.275	-5.972	-7.102	-7.241	
	K-BAR	0.961	0.961	0.961	0.961	0.961	0.961	0.961	
	V-BAR	159.172	169.292	170.977	171.294	171.658	170.200	161.883	
	VZ-BAR	156.044	167.749	168.773	169.273	169.312	167.046	158.596	
	V-THET-BAR	18.913	22.806	27.360	26.263	28.273	32.611	32.433	
	MACH-BAR	0.478	0.510	0.515	0.516	0.518	0.513	0.487	
	U-WHEEL	195.245	200.995	212.497	223.999	235.500	247.002	252.753	
	V-BAR-PR	230.793	244.729	250.521	250.518	267.601	271.788	271.486	
	BETABAR-PR	48.131	46.729	47.647	49.438	50.750	52.075	54.252	
	V-THET-B-P	-176.333	-178.192	-185.137	-197.765	-207.227	-214.391	-220.320	
	MACH-BAR-P	0.711	0.737	0.755	0.785	0.807	0.819	0.816	
ROTOR TRAILING EDGE	DIAMETER	0.4191	0.4304	0.4531	0.4758	0.4985	0.5212	0.5325	
	P-TOTAL	13.805	13.660	13.504	13.404	13.132	12.629	12.228	13.263
ROTOR	T-TOTAL	319.24	317.35	313.34	312.74	312.09	311.83	311.83	313.43
	P-STATIC	9.326	9.432	9.613	9.760	9.881	9.990	10.045	
PR = 1.3132	BETABAR	43.284	41.944	37.707	36.188	36.938	40.699	44.131	
TR = 1.0877	EPSILON	-0.000	-0.764	-2.240	-3.947	-5.567	-6.858	-7.367	
EFF-A = 0.9228	K-BAR	0.921	0.921	0.921	0.921	0.921	0.921	0.921	
EFF-P = 0.9265	V-BAR	260.733	253.016	241.351	233.356	221.218	201.414	184.995	
	VZ-BAR	189.804	188.180	190.934	188.338	176.818	152.711	132.781	
	V-THET-BAR	178.763	169.114	147.619	137.781	132.937	131.313	128.811	
	MACH-BAR	0.770	0.747	0.714	0.689	0.650	0.588	0.547	
	U-WHEEL	195.245	200.528	211.095	221.662	232.229	242.795	248.079	
	V-BAR-PR	190.518	190.819	201.232	206.178	202.793	189.100	178.482	
	BETABAR-PR	4.963	9.471	18.384	24.007	29.318	36.140	41.931	
	V-THET-B-P	-16.482	-31.408	-63.476	-83.881	-99.291	-111.482	-119.268	
	MACH-BAR-P	0.562	0.563	0.595	0.608	0.596	0.552	0.518	
	D-FACTOR	0.431	0.435	0.378	0.381	0.405	0.461	0.499	
	TURNING	43.2	37.3	29.3	25.4	21.4	15.9	12.3	
	INCID-M	-9.5	-9.5	-7.6	-6.1	-6.1	-6.5	-4.8	
	DEVIATION	17.4	13.6	9.7	5.9	3.9	4.6	7.5	
	OMEGABAR-P	0.081	0.110	0.011	0.014	0.054	0.738	0.183	
	LOSS PAR	0.028	0.039	0.004	0.005	0.020	0.049	0.061	
	PT-RATIO	1.398	1.355	1.336	1.325	1.297	1.252	1.231	1.3132
	EFF-AD	0.932	0.895	0.988	0.983	0.929	0.809	0.747	0.9228
	EFF-POLY	0.934	0.899	0.987	0.985	0.931	0.814	0.753	0.9265
STATOR LEADING EDGE	DIAMETER	0.4191	0.4300	0.4519	0.4737	0.4956	0.5174	0.5283	
	P-TOTAL	13.805	13.662	13.506	13.408	13.144	12.643	12.228	13.263
	T-TOTAL	319.24	317.38	313.42	312.74	312.11	311.83	311.83	313.43
	P-STATIC	8.937	9.026	9.177	9.310	9.435	9.533	9.567	
	BETABAR	40.778	39.405	35.304	33.710	34.139	36.890	39.078	
	EPSILON	-0.000	-0.734	-2.299	-3.858	-5.287	-6.672	-7.350	
	K-BAR	0.884	0.884	0.884	0.884	0.884	0.884	0.884	
	V-BAR	273.702	266.869	256.544	249.351	238.059	220.301	205.960	
	VZ-BAR	207.260	206.187	209.354	207.425	197.037	176.198	159.884	
	V-THET-BAR	178.763	169.413	148.262	138.387	133.598	132.234	129.833	
	MACH-BAR	0.813	0.795	0.764	0.741	0.705	0.648	0.602	
STATOR TRAILING EDGE	DIAMETER	0.4191	0.4289	0.4485	0.4681	0.4877	0.5073	0.5171	
	P-TOTAL	12.457	12.619	12.968	12.942	12.684	12.270	12.055	12.693
ROTOR PLUS STATOR	T-TOTAL	319.24	317.38	313.43	312.73	312.12	311.83	311.83	313.43
	P-STATIC	9.426	9.437	9.447	9.420	9.367	9.297	9.260	
PR = 1.2568	BETABAR	13.268	12.222	9.986	10.142	10.637	9.411	8.765	
TR = 1.0877	EPSILON	-0.000	-0.649	-1.852	-3.010	-4.177	-5.465	-6.309	
EFF-A = 0.7697	K-BAR	0.887	0.887	0.887	0.887	0.887	0.887	0.887	
EFF-P = 0.7770	V-BAR	221.618	225.362	233.396	233.495	228.078	218.483	213.250	
	VZ-BAR	215.703	220.253	229.859	229.807	224.158	215.543	210.782	
	V-THET-BAR	50.863	47.703	40.469	41.109	42.101	35.726	32.350	
IGV,ROTOR,STATOR	MACH-BAR	0.644	0.658	0.688	0.689	0.672	0.642	0.625	
	EFF-POLY	0.341	0.359	0.414	0.248	-0.252	-5.099	1.778	
PR = 1.2528	INCID-M	-14.8	-13.2	-15.5	-16.8	-17.4	-17.0	-14.8	
TR = 1.0877	DEVIATION	12.3	10.8	9.1	9.8	11.4	11.5	11.9	
EFF-A = 0.7624	OMEGA-BAR	0.277	0.225	0.124	0.114	0.124	0.120	0.062	
EFF-P = 0.7663	LOSS PAR	0.096	0.080	0.047	0.045	0.051	0.051	0.028	
	D-FACTOR	0.356	0.322	0.252	0.221	0.205	0.203	0.178	
	TURNING	27.5	27.2	25.3	23.6	23.5	27.5	30.4	

Table B-2. Base Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 6)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.4191	0.4352	0.4675	0.4998	0.5321	0.5644	0.5805	
	P-TOTAL	9.919	10.130	10.139	10.140	10.144	10.141	9.969	10.131
WCOR=13.851	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 932.1	P-STATIC	9.619	9.605	9.605	9.607	9.609	9.613	9.624	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.062	-2.812	-4.471	-6.002	-7.391	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	71.102	93.431	94.226	94.165	94.315	93.744	76.169	
	VZ-BAR	71.102	93.431	94.226	94.165	94.315	93.744	76.169	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.210	0.277	0.279	0.279	0.279	0.278	0.225	
IGV TRAILING EDGE	DIAMETER	0.4191	0.4342	0.4643	0.4945	0.5246	0.5548	0.5698	
	P-TOTAL	9.891	10.096	10.119	10.119	10.118	10.113	9.942	10.105
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.425	9.444	9.450	9.454	9.459	9.465	9.454	
	BETABAR	10.879	10.902	11.384	12.011	12.451	12.758	13.131	
	EPSILON	-0.000	-1.013	-2.747	-4.393	-5.916	-7.291	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	89.023	104.567	105.885	105.575	105.078	104.210	90.988	
	VZ-BAR	87.423	102.680	103.802	103.264	102.606	101.638	88.609	
	V-THET-BAR	16.802	19.777	20.899	21.971	22.654	23.013	20.670	
	MACH-BAR	0.263	0.310	0.314	0.313	0.312	0.309	0.269	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-2.1	-2.6	-3.2	-3.6	-4.2	-5.0	-5.1	
	OMEGABAR	0.093	0.064	0.038	0.039	0.049	0.053	0.076	
	TURNING	-10.9	-10.9	-11.4	-12.0	-12.5	-12.8	-13.1	
ROTOR LEADING EDGE	DIAMETER	0.4191	0.4314	0.4561	0.4808	0.5055	0.5302	0.5425	
	P-TOTAL	9.891	10.097	10.119	10.119	10.118	10.114	9.942	10.105
WCOR=13.886	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 932.1	P-STATIC	8.990	8.989	8.986	8.984	8.987	8.992	8.993	
	BETABAR	7.732	8.338	8.818	9.361	9.752	10.049	9.788	
	EPSILON	-0.000	-0.839	-2.509	-4.323	-5.996	-7.092	-7.241	
	K-BAR	0.967	0.967	0.967	0.967	0.967	0.967	0.967	
	V-BAR	124.889	137.514	138.972	139.093	138.859	138.280	127.962	
	VZ-BAR	123.754	136.060	137.330	137.241	136.852	136.167	126.107	
	V-THET-BAR	16.802	19.941	21.302	22.623	23.521	24.081	21.710	
	MACH-BAR	0.372	0.411	0.415	0.416	0.415	0.413	0.381	
	U-WHEEL	195.314	201.070	212.576	224.082	235.588	247.094	252.847	
	V-BAR-PR	217.216	226.539	235.470	243.765	252.392	261.300	263.300	
	BETABAR-PR	55.269	53.087	54.322	55.735	57.164	58.592	61.383	
	V-THET-B-P	-178.515	-181.128	-191.274	-201.458	-212.067	-223.013	-231.136	
	MACH-BAR-P	0.647	0.677	0.704	0.728	0.754	0.781	0.785	
ROTOR TRAILING EDGE	DIAMETER	0.4191	0.4304	0.4531	0.4758	0.4985	0.5212	0.5325	
	P-TOTAL	14.225	14.108	13.888	13.683	13.551	13.295	13.084	13.700
ROTOR	T-TOTAL	321.68	319.95	315.87	314.89	314.72	315.35	315.69	316.11
———	P-STATIC	10.290	10.410	10.607	10.757	10.886	11.003	11.060	
PR = 1.3556	BETABAR	52.699	50.795	44.985	44.691	45.183	48.529	50.728	
TR = 1.0970	EPSILON	-0.000	-0.784	-2.291	-3.974	-5.605	-6.887	-7.367	
EFF-A = 0.9378	K-BAR	0.933	0.933	0.933	0.933	0.933	0.933	0.933	
EFF-P = 0.9397	V-BAR	239.071	231.228	216.876	205.020	195.823	182.586	172.449	
	VZ-BAR	144.878	146.134	153.378	145.750	138.027	120.924	109.160	
	V-THET-BAR	190.172	179.177	153.319	144.187	138.906	136.796	133.501	
	MACH-BAR	0.696	0.673	0.633	0.596	0.568	0.527	0.496	
	U-WHEEL	195.317	200.602	211.173	221.744	232.315	242.886	248.171	
	V-BAR-PR	144.970	147.749	163.960	165.107	166.669	160.885	158.319	
	BETABAR-PR	2.034	8.325	20.656	28.019	34.089	41.265	46.410	
	V-THET-B-P	-5.145	-21.426	-57.854	-77.557	-93.409	-106.089	-114.069	
	MACH-BAR-P	0.422	0.430	0.478	0.480	0.483	0.464	0.455	
	U-FACTOR	0.612	0.600	0.516	0.542	0.531	0.572	0.586	
	TURNING	53.2	44.8	33.7	27.7	23.1	17.3	15.0	
	INCID-M	-2.3	-3.2	-1.0	0.2	0.4	0.1	2.3	
	DEVIATION	14.4	12.4	12.0	9.9	8.7	9.7	11.8	
	OMEGABAR-P	0.096	0.116	0.015	0.028	0.051	0.118	0.129	
	LOSS PAR	0.034	0.042	0.005	0.010	0.018	0.039	0.040	
	PT-RATIO	1.438	1.397	1.373	1.352	1.339	1.316	1.316	1.3558
	EFF-AU	0.935	0.909	0.986	0.971	0.945	0.867	0.835	0.9378
	EFF-POLY	0.938	0.913	0.986	0.972	0.946	0.871	0.860	0.9397
STATOR LEADING EDGE	DIAMETER	0.4191	0.4300	0.4519	0.4737	0.4956	0.5174	0.5283	
	P-TOTAL	14.225	14.110	13.893	13.689	13.556	13.301	13.084	13.700
	T-TOTAL	321.88	319.98	315.94	314.89	314.71	315.34	315.69	316.11
	P-STATIC	10.162	10.272	10.459	10.593	10.716	10.812	10.849	
	BETABAR	51.377	49.497	43.845	43.230	43.541	46.224	47.738	
	EPSILON	-0.000	-0.751	-2.322	-3.930	-5.367	-6.666	-7.358	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	243.416	236.070	222.390	211.367	202.643	190.819	181.820	
	VZ-BAR	151.940	153.299	160.375	154.006	146.891	132.019	122.279	
	V-THET-BAR	190.172	179.503	154.053	144.769	139.596	137.776	134.560	
	MACH-BAR	0.710	0.689	0.650	0.616	0.589	0.552	0.524	
STATOR TRAILING EDGE	DIAMETER	0.4191	0.4289	0.4485	0.4681	0.4877	0.5073	0.5171	
	P-TOTAL	13.633	13.633	13.637	13.545	13.369	13.141	13.023	13.459
ROTOR PLUS STATOR	T-TOTAL	321.88	319.97	315.95	314.89	314.70	315.32	315.69	316.11
———	P-STATIC	11.790	11.794	11.791	11.772	11.744	11.709	11.691	
PR = 1.3319	BETABAR	15.922	14.032	10.046	8.683	9.063	8.772	8.594	
TR = 1.0970	EPSILON	-0.000	-0.670	-1.862	-2.999	-4.166	-5.459	-6.309	
EFF-A = 0.8801	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8849	V-BAR	162.113	161.448	160.750	157.635	151.615	143.319	138.775	
	VZ-BAR	155.693	156.625	158.281	155.829	149.723	141.642	137.216	
	V-THET-BAR	44.473	39.145	28.041	23.797	23.881	21.856	20.738	
IGV,ROTOR,STATOR	MACH-BAR	0.460	0.460	0.461	0.452	0.434	0.409	0.396	
	EFF-POLY	0.776	0.800	0.864	0.907	0.867	0.868	0.939	
PR = 1.3286	INCID-M	-4.2	-3.1	-7.0	-7.3	-8.0	-7.7	-6.2	
TR = 1.0970	DEVIATION	15.1	12.6	9.2	8.3	9.8	10.9	11.7	
EFF-A = 0.8746	OMEGA-BAR	0.146	0.124	0.074	0.047	0.066	0.064	0.027	
EFF-P = 0.8771	LOSS PAR	0.050	0.044	0.028	0.018	0.027	0.028	0.012	
	D-FACTOR	0.546	0.533	0.495	0.485	0.493	0.517	0.518	
	TURNING	35.5	35.5	33.8	34.5	34.5	37.5	39.1	

Table B-2. Base Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 7)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.4191	0.4352	0.4675	0.4998	0.5321	0.5644	0.5805	
	P-TOTAL	9.917	10.131	10.141	10.153	10.146	10.146	9.971	10.131
WCOR=11.843	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 933.3	P-STATIC	9.758	9.751	9.751	9.752	9.754	9.756	9.761	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.227	-2.924	-4.550	-6.042	-7.325	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	51.584	79.316	80.350	79.436	80.516	80.291	59.256	
	VZ-BAR	51.584	79.316	80.350	79.436	80.516	80.291	59.256	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.152	0.234	0.237	0.235	0.238	0.237	0.175	
IGV TRAILING EDGE	DIAMETER	0.4191	0.4342	0.4643	0.4945	0.5246	0.5548	0.5698	
	P-TOTAL	9.900	10.106	10.125	10.121	10.127	10.121	9.950	10.112
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.634	9.639	9.642	9.645	9.649	9.654	9.653	
	BETABAR	11.115	10.741	11.222	11.949	12.233	12.149	12.630	
	EPSILON	-0.000	-1.100	-2.810	-4.444	-5.947	-7.249	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	66.929	88.116	89.582	88.940	89.111	88.174	70.765	
	VZ-BAR	65.673	86.572	87.869	87.013	87.088	86.400	69.014	
	V-THET-BAR	12.903	16.422	17.453	18.414	18.882	18.556	15.404	
	MACH-BAR	0.197	0.261	0.265	0.263	0.264	0.261	0.209	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-1.6	-2.8	-3.3	-3.7	-4.5	-5.6	-5.6	
	OMEGABAR	0.107	0.067	0.043	0.033	0.048	0.083	0.100	
	TURNING	-11.1	-10.7	-11.2	-11.9	-12.2	-12.1	-12.6	
ROTOR LEADING EDGE	DIAMETER	0.4191	0.4314	0.4561	0.4808	0.5055	0.5302	0.5425	
	P-TOTAL	9.900	10.107	10.124	10.121	10.127	10.123	9.950	10.112
WCOR=11.866	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 933.3	P-STATIC	9.292	9.290	9.287	9.286	9.288	9.292	9.293	
	BETABAR	7.273	8.122	8.609	9.200	9.492	9.456	8.833	
	EPSILON	-0.000	-0.853	-2.484	-4.476	-6.347	-7.383	-7.241	
	K-BAR	0.946	0.946	0.946	0.946	0.946	0.946	0.946	
	V-BAR	101.919	117.388	118.739	118.614	118.861	118.478	103.773	
	VZ-BAR	101.099	116.210	117.401	117.089	117.234	116.669	104.518	
	V-THET-BAR	12.903	16.586	17.773	18.964	19.602	19.436	16.242	
	MACH-BAR	0.302	0.349	0.355	0.353	0.354	0.352	0.314	
	U-WHEEL	195.583	201.343	212.865	224.387	235.908	247.430	253.190	
	V-BAR-PR	208.790	218.266	227.694	236.449	246.034	256.117	258.976	
	BETABAR-PR	61.039	57.851	58.960	60.317	61.543	62.900	66.198	
	V-THET-B-P	-182.660	-184.757	-195.091	-205.422	-216.306	-227.998	-236.948	
	MACH-BAR-P	0.619	0.649	0.677	0.703	0.732	0.762	0.780	
ROTOR TRAILING EDGE	DIAMETER	0.4191	0.4304	0.4531	0.4758	0.4985	0.5212	0.5325	
	P-TOTAL	14.214	14.181	14.178	14.183	14.026	13.747	13.564	14.069
ROTOR	T-TOTAL	322.38	321.00	318.06	317.62	318.02	320.14	321.25	318.93
PR = 1.3913	P-STATIC	10.706	10.828	11.038	11.206	11.349	11.481	11.549	
TR = 1.1068	BETABAR	57.163	55.775	49.624	48.909	50.335	57.534	61.969	
EFF-A = 0.9289	EPSILON	-0.000	-0.832	-2.219	-3.916	-5.615	-6.841	-7.367	
EFF-P = 0.9361	K-BAR	0.892	0.892	0.892	0.892	0.892	0.892	0.892	
	V-BAR	224.442	218.719	209.994	203.858	193.675	179.587	170.218	
	VZ-BAR	121.704	122.996	136.022	133.988	123.626	96.422	79.994	
	V-THET-BAR	188.580	180.839	159.973	153.640	149.076	151.401	150.250	
	MACH-BAR	0.649	0.633	0.609	0.590	0.558	0.514	0.485	
	U-WHEEL	195.583	200.875	211.460	222.046	232.631	243.216	248.508	
	V-BAR-PR	121.905	124.668	145.463	150.440	149.229	133.165	126.705	
	BETABAR-PR	3.293	9.224	20.719	27.046	34.060	43.608	50.850	
	V-THET-B-P	-7.003	-20.036	-51.488	-68.405	-83.555	-91.755	-98.258	
	MACH-BAR-P	0.353	0.361	0.422	0.435	0.430	0.381	0.361	
	D-FACTOR	0.710	0.699	0.596	0.591	0.615	0.705	0.740	
	TURNING	57.7	48.0	38.2	33.3	27.5	19.3	15.3	
	INCID-M	3.4	1.6	3.7	4.8	4.7	4.4	7.1	
	DEVIATION	15.7	13.3	12.0	9.0	8.7	12.1	10.2	
	OMEGABAR-P	0.133	0.155	0.031	0.019	0.064	0.178	0.206	
	LOSS PAR	0.047	0.055	0.011	0.007	0.022	0.057	0.059	
	PT-RATIO	1.436	1.404	1.401	1.401	1.384	1.361	1.363	1.3913
	EFF-AD	0.917	0.892	0.975	0.984	0.940	0.831	0.807	0.9289
	EFF-POLY	0.921	0.896	0.975	0.984	0.942	0.837	0.814	0.9301
STATOR LEADING EDGE	DIAMETER	0.4191	0.4300	0.4519	0.4737	0.4956	0.5174	0.5283	
	P-TOTAL	14.214	14.181	14.177	14.184	14.035	13.757	13.564	14.069
	T-TOTAL	322.38	321.02	318.11	317.61	317.97	320.07	321.25	318.93
	P-STATIC	10.540	10.645	10.825	10.987	11.139	11.272	11.332	
	BETABAR	54.971	53.510	47.539	46.668	47.796	53.912	57.405	
	EPSILON	-0.000	-0.526	-2.365	-3.810	-5.173	-6.483	-7.358	
	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
	V-BAR	230.297	225.266	217.715	211.960	202.037	188.596	179.753	
	VZ-BAR	132.190	133.939	146.964	145.453	135.724	111.699	96.832	
	V-THET-BAR	188.580	181.098	160.614	154.176	149.653	152.375	151.442	
	MACH-BAR	0.668	0.653	0.633	0.615	0.584	0.541	0.513	
STATOR TRAILING EDGE	DIAMETER	0.4191	0.4289	0.4485	0.4681	0.4877	0.5073	0.5171	
	P-TOTAL	12.754	13.663	13.864	13.793	13.620	13.399	13.286	13.658
ROTOR PLUS STATOR	T-TOTAL	322.38	321.14	318.16	317.79	317.91	319.92	321.25	318.93
PR = 1.3566	P-STATIC	12.218	12.231	12.234	12.221	12.197	12.168	12.152	
TR = 1.1068	BETABAR	16.882	14.850	12.242	9.822	7.226	4.583	3.228	
EFF-A = 0.8398	EPSILON	-0.000	-0.415	-1.761	-2.768	-3.804	-5.200	-6.309	
EFF-P = 0.8465	K-BAR	0.862	0.862	0.862	0.862	0.862	0.862	0.862	
	V-BAR	88.913	141.466	149.768	147.294	140.804	132.124	127.409	
	VZ-BAR	85.081	136.752	146.359	145.153	139.684	131.701	127.207	
IGV,ROTOR,STATOR	V-THET-BAR	25.820	36.205	31.767	25.128	17.714	10.556	7.173	
	MACH-BAR	0.249	0.400	0.426	0.419	0.400	0.374	0.359	
PR = 1.3481	EFF-POLY	0.576	0.781	0.841	0.792	0.755	0.755	0.770	
TR = 1.1068	INCID-M	-0.6	0.9	-3.3	-3.8	-3.8	0.0	3.5	
EFF-A = 0.8370	DEVIATION	16.1	13.4	11.4	9.5	7.9	6.7	6.4	
EFF-P = 0.8412	OMEGA-BAR	0.397	0.147	0.094	0.122	0.143	0.144	0.125	
	LOSS PAR	0.135	0.051	0.035	0.048	0.059	0.062	0.055	
	D-FACTOR	0.865	0.608	0.540	0.550	0.579	0.630	0.651	
	TURNING	38.1	38.7	35.3	36.8	40.6	49.3	54.2	

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Table B-2. Base Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 8)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG	
IGV LEADING EDGE	DIAMETER	0.4191	0.4352	0.4675	0.4998	0.5321	0.5644	0.5805		
	P-TOTAL	9.917	10.128	10.142	10.139	10.142	10.145	9.973		10.131
NCOR=13.936	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17		288.17
NCOR= 767.6	P-STATIC	9.613	9.599	9.599	9.600	9.603	9.606	9.617		
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
	EPSILON	-0.000	-1.066	-2.809	-4.462	-6.002	-7.402	-8.193		
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	V-BAR	71.599	93.823	95.075	94.675	94.723	94.626	77.343		
	VZ-BAR	71.599	93.823	95.075	94.675	94.723	94.626	77.343		
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
	MACH-BAR	0.211	0.278	0.282	0.280	0.280	0.280	0.228		
IGV TRAILING EDGE	DIAMETER	0.4191	0.4342	0.4643	0.4945	0.5246	0.5548	0.5698		
	P-TOTAL	9.889	10.094	10.120	10.116	10.124	10.113	9.942		10.105
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17		288.17
	P-STATIC	9.417	9.436	9.442	9.445	9.452	9.457	9.445		
	BETABAR	10.827	10.917	11.512	12.191	12.116	12.054	13.198		
	EPSILON	-0.000	-1.010	-2.741	-4.382	-5.911	-7.300	-8.047		
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	V-BAR	89.619	105.079	106.625	105.972	106.073	104.825	91.722		
	VZ-BAR	88.024	103.177	104.460	103.583	103.711	102.280	89.299		
	V-THET-BAR	16.834	19.900	21.280	22.378	22.264	22.962	20.941		
	MACH-BAR	0.265	0.312	0.316	0.314	0.315	0.311	0.271		
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1		
	DEVIATION	-4.1	-2.6	-3.0	-3.4	-4.6	-5.1	-5.1		
	OMEGABAR	0.094	0.064	0.041	0.044	0.035	0.060	0.087		
	TURNING	-10.8	-10.9	-11.5	-12.2	-12.1	-12.7	-13.2		
ROTOR LEADING EDGE	DIAMETER	0.4191	0.4314	0.4561	0.4808	0.5055	0.5302	0.5425		
	P-TOTAL	9.889	10.095	10.120	10.116	10.124	10.114	9.942		10.105
NCOR=13.972	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17		288.17
NCOR= 767.6	P-STATIC	8.959	8.958	8.954	8.953	8.955	8.960	8.961		
	BETABAR	7.625	8.276	8.849	9.411	9.422	9.860	9.733		
	EPSILON	-0.000	-0.834	-2.497	-4.288	-5.957	-7.031	-7.241		
	K-BAR	0.961	0.961	0.961	0.961	0.961	0.961	0.961		
	V-BAR	126.874	139.385	141.040	140.892	141.181	140.298	130.103		
	VZ-BAR	125.753	137.933	139.361	138.996	139.276	138.226	128.231		
	V-THET-BAR	16.834	20.068	21.695	23.038	23.112	24.023	21.995		
	MACH-BAR	0.378	0.417	0.422	0.421	0.422	0.419	0.388		
	U-WHEEL	160.841	165.578	175.053	184.528	194.003	203.478	208.216		
	V-BAR-PR	191.185	200.496	207.222	213.071	220.459	226.521	220.106		
	BETABAR-PR	48.671	46.531	47.737	49.281	50.819	52.394	55.449		
	V-THET-B-P	-144.007	-145.511	-153.358	-161.490	-170.891	-179.455	-186.221		
	MACH-BAR-P	0.570	0.599	0.620	0.637	0.659	0.677	0.674		
ROTOR TRAILING EDGE	DIAMETER	0.4191	0.4304	0.4531	0.4758	0.4985	0.5212	0.5325		
ROTOR	P-TOTAL	12.469	12.446	12.375	12.254	12.079	11.792	11.454		12.184
	T-TOTAL	309.55	308.12	305.04	304.61	303.98	303.60	303.59		305.04
PR = 1.2057	P-STATIC	9.509	9.584	9.707	9.802	9.880	9.948	9.982		
TR = 1.0585	BETABAR	44.267	42.089	36.092	35.867	35.245	36.804	39.836		
EFF-A = 0.9383	EPSILON	-0.000	-0.776	-2.266	-3.975	-5.594	-6.850	-7.367		
EFF-P = 0.9395	K-BAR	0.921	0.921	0.921	0.921	0.921	0.921	0.921		
	V-BAR	215.265	211.021	202.668	194.494	184.603	170.072	152.293		
	VZ-BAR	154.099	156.579	163.759	157.614	150.764	136.183	117.711		
	V-THET-BAR	150.308	141.443	119.389	113.954	106.528	101.868	98.198		
	MACH-BAR	0.634	0.622	0.599	0.574	0.543	0.499	0.447		
	U-WHEEL	160.841	165.193	173.898	182.603	191.308	200.013	204.365		
	V-BAR-PR	154.458	158.405	172.615	171.919	172.970	167.888	158.517		
	BETABAR-PR	3.910	8.613	18.404	23.536	29.351	35.788	42.048		
	V-THET-B-P	-10.533	-23.751	-54.509	-68.649	-84.779	-98.145	-106.188		
	MACH-BAR-P	0.455	0.467	0.510	0.507	0.509	0.492	0.463		
	D-FACTOR	0.436	0.428	0.340	0.364	0.375	0.408	0.448		
	TURNING	45.0	37.9	29.3	25.7	21.5	16.6	13.4		
	INCID-M	-8.7	-9.7	-7.5	-0.2	-0.0	-0.1	-3.6		
	DEVIATION	16.3	12.7	9.7	5.5	4.0	4.3	7.4		
	OMEGABAR-P	0.095	0.114	-0.010	0.010	0.040	0.101	0.151		
	LOSS PAR	0.032	0.041	-0.004	0.003	0.015	0.036	0.050		
	PT-RATIO	1.261	1.233	1.223	1.211	1.193	1.168	1.152		1.2057
	EFF-AD	0.924	0.891	1.013	0.988	0.944	0.847	0.772		0.9383
	EFF-POLY	0.926	0.893	1.011	0.987	0.944	0.849	0.775		0.9395
STATOR LEADING EDGE	DIAMETER	0.4191	0.4300	0.4519	0.4737	0.4956	0.5174	0.5283		
	P-TOTAL	12.469	12.446	12.377	12.259	12.085	11.803	11.454		12.184
	T-TOTAL	309.55	308.14	305.09	304.61	303.98	303.60	303.59		305.04
	P-STATIC	9.248	9.314	9.426	9.508	9.585	9.637	9.646		
	BETABAR	41.775	39.704	34.061	33.543	32.809	33.041	35.386		
	EPSILON	-0.000	-0.794	-2.295	-3.826	-5.192	-6.572	-7.358		
	K-BAR	0.884	0.884	0.884	0.884	0.884	0.884	0.884		
	V-BAR	225.617	221.820	214.227	206.993	197.817	185.294	170.921		
	VZ-BAR	168.257	170.639	177.461	172.522	166.400	154.264	139.347		
	V-THET-BAR	150.308	141.701	119.986	114.377	107.186	102.646	98.976		
	MACH-BAR	0.667	0.657	0.636	0.613	0.585	0.546	0.501		
STATOR TRAILING EDGE	DIAMETER	0.4191	0.4289	0.4485	0.4681	0.4877	0.5073	0.5171		
ROTOR PLUS STATOR	P-TOTAL	11.925	11.985	12.115	12.069	11.862	11.599	11.465		11.921
	T-TOTAL	309.55	308.14	305.11	304.61	304.00	303.60	303.59		305.04
PR = 1.1797	P-STATIC	9.683	9.690	9.693	9.670	9.627	9.575	9.547		
TR = 1.0585	BETABAR	14.292	12.564	8.869	8.528	8.913	7.038	5.988		
EFF-A = 0.8660	EPSILON	-0.000	-0.643	-1.846	-2.997	-4.180	-5.469	-6.309		
EFF-P = 0.8300	K-BAR	0.887	0.887	0.887	0.887	0.887	0.887	0.887		
	V-BAR	189.524	190.959	194.532	193.783	188.020	180.337	170.312		
	VZ-BAR	183.659	186.381	192.202	191.640	185.750	178.978	175.350		
IGV,ROTOR,STATOR	V-THET-BAR	46.785	41.533	29.990	28.737	29.130	22.097	18.393		
	MACH-BAR	0.553	0.559	0.573	0.572	0.564	0.531	0.518		
PR = 1.1767	EFF-POLY	0.507	0.511	0.563	0.519	0.190	-0.578	0.914		
TR = 1.0585	INCID-M	-13.8	-12.9	-16.8	-17.0	-18.8	-20.2	-18.5		
EFF-A = 0.8162	DEVIATION	13.5	11.2	8.0	8.2	9.6	9.1	9.1		
EFF-P = 0.8172	OMEGA-BAR	0.169	0.147	0.089	0.069	0.089	0.094	-0.006		
	LOSS PAR	0.058	0.052	0.033	0.027	0.037	0.041	-0.003		
	D-FACTOR	0.323	0.304	0.253	0.231	0.217	0.221	0.180		
	TURNING	27.5	27.1	25.2	25.0	23.9	26.6	29.4		

Table B-2. Base Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 9)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.4191	0.4352	0.4675	0.4998	0.5321	0.5644	0.5805	
	P-TOTAL	9.921	10.135	10.141	10.138	10.135	10.149	9.975	10.131
WCOR=11.651	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 768.0	P-STATIC	9.770	9.764	9.764	9.765	9.767	9.769	9.773	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.205	-2.855	-4.462	-5.993	-7.322	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	50.274	78.404	78.980	78.522	78.068	79.303	58.105	
	VZ-BAR	50.274	78.404	78.980	78.522	78.068	79.303	58.105	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.148	0.232	0.233	0.232	0.231	0.234	0.171	
IGV TRAILING EDGE	DIAMETER	0.4191	0.4342	0.4643	0.4945	0.5246	0.5548	0.5698	
	P-TOTAL	9.895	10.100	10.119	10.117	10.120	10.121	9.950	10.108
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.644	9.649	9.652	9.656	9.660	9.664	9.663	
	BETABAR	11.502	11.049	11.490	12.114	12.512	12.246	12.629	
	EPSILON	-0.000	-1.081	-2.750	-4.369	-5.905	-7.254	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	84.954	86.624	88.059	87.590	87.490	87.128	69.460	
	VZ-BAR	83.649	85.018	86.294	85.640	85.412	85.146	67.780	
	V-THET-BAR	12.952	16.602	17.541	18.382	18.955	18.481	15.186	
	MACH-BAR	0.192	0.256	0.260	0.259	0.259	0.258	0.205	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-1.5	-2.5	-3.1	-3.5	-4.2	-5.5	-5.6	
	OMEGABAR	0.170	0.095	0.059	0.055	0.040	0.074	0.123	
	TURNING	-11.5	-11.0	-11.5	-12.1	-12.5	-12.2	-12.6	
ROTOR LEADING EDGE	DIAMETER	0.4191	0.4314	0.4561	0.4808	0.5055	0.5302	0.5425	
	P-TOTAL	9.895	10.102	10.118	10.117	10.120	10.123	9.950	10.108
WCOR=11.678	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 768.0	P-STATIC	9.348	9.349	9.347	9.346	9.348	9.351	9.350	
	BETABAR	7.713	8.567	9.037	9.573	9.946	9.788	9.088	
	EPSILON	-0.000	-0.793	-2.330	-4.121	-5.726	-6.803	-7.241	
	K-BAR	0.967	0.967	0.967	0.967	0.967	0.967	0.967	
	V-BAR	96.512	112.537	113.847	113.634	113.928	113.846	100.978	
	VZ-BAR	95.639	111.281	112.434	112.249	112.216	112.189	99.710	
	V-THET-BAR	12.953	16.766	17.881	18.931	19.678	19.354	16.950	
	MACH-BAR	0.286	0.334	0.338	0.338	0.339	0.338	0.299	
	U-WHEEL	160.925	165.664	175.144	184.624	194.104	203.584	208.324	
	V-BAR-PR	176.189	185.888	193.323	200.135	207.405	215.704	216.679	
	BETABAR-PR	57.124	53.227	54.436	55.884	57.244	56.663	52.602	
	V-THET-B-P	-147.972	-148.898	-157.262	-165.692	-174.425	-184.230	-192.373	
	MACH-BAR-P	0.522	0.552	0.574	0.595	0.616	0.641	0.642	
ROTOR TRAILING EDGE	DIAMETER	0.4191	0.4304	0.4531	0.4758	0.4985	0.5212	0.5325	
	P-TOTAL	12.563	12.540	12.470	12.395	12.320	12.218	12.113	12.384
ROTOR	T-TOTAL	311.07	309.59	306.53	305.92	305.71	306.18	306.46	306.73
PR = 1.2252	P-STATIC	10.132	10.213	10.345	10.446	10.532	10.611	10.650	
TR = 1.0644	BETABAR	53.879	51.371	48.905	46.053	43.119	44.851	45.343	
EFF-A = 0.9304	EPSILON	-0.000	-0.905	-2.422	-4.041	-5.612	-6.792	-7.367	
EFF-P = 0.9294	K-BAR	0.933	0.933	0.933	0.933	0.933	0.933	0.933	
	V-BAR	192.964	188.207	178.904	171.239	164.027	155.854	149.124	
	VZ-BAR	113.751	117.456	128.882	125.129	119.730	110.493	104.815	
	V-THET-BAR	155.872	147.017	124.064	116.900	112.114	109.916	106.075	
	MACH-BAR	0.563	0.549	0.523	0.500	0.478	0.453	0.433	
	U-WHEEL	160.925	165.479	173.988	182.698	191.407	200.116	204.471	
	V-BAR-PR	113.863	118.930	138.242	141.381	143.607	142.639	143.763	
	BETABAR-PR	2.544	8.797	21.159	27.738	33.515	39.226	43.191	
	V-THET-B-P	-5.053	-18.262	-49.925	-65.798	-79.293	-90.200	-98.396	
	MACH-BAR-P	0.332	0.347	0.404	0.413	0.419	0.415	0.417	
	D-FACTOR	0.637	0.612	0.493	0.489	0.494	0.521	0.521	
	TURNING	54.6	44.4	33.3	28.1	23.7	19.4	19.4	
	INCID-M	-0.5	-3.0	-0.8	0.4	0.4	0.1	3.5	
	DEVIATION	15.0	12.9	12.5	9.7	8.1	7.7	8.6	
	OMEGABAR-P	0.168	0.182	0.035	0.028	0.044	0.094	0.075	
	LOSS PAR	0.059	0.065	0.012	0.010	0.015	0.032	0.025	
	PT-RATIO	1.270	1.241	1.233	1.225	1.217	1.208	1.217	1.2252
	EFF-AD	0.889	0.858	0.967	0.971	0.950	0.888	0.912	0.9304
	EFF-POLY	0.892	0.861	0.967	0.970	0.951	0.890	0.913	0.9294
STATOR LEADING EDGE	DIAMETER	0.4191	0.4300	0.4519	0.4737	0.4956	0.5174	0.5283	
	P-TOTAL	12.563	12.540	12.472	12.397	12.322	12.220	12.113	12.384
	T-TOTAL	311.07	309.61	306.58	305.92	305.71	306.17	306.46	306.73
	P-STATIC	10.045	10.120	10.247	10.336	10.413	10.474	10.497	
	BETABAR	52.412	49.993	46.812	41.708	41.605	42.846	42.887	
	EPSILON	-0.000	-0.919	-2.514	-3.984	-5.366	-6.612	-7.354	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	196.705	192.264	183.368	176.394	169.816	162.831	157.103	
	VZ-BAR	119.986	123.568	134.499	131.687	126.979	119.386	115.109	
	V-THET-BAR	155.872	147.257	124.616	117.360	112.756	110.729	106.917	
	MACH-BAR	0.574	0.562	0.537	0.516	0.496	0.474	0.457	
STATOR TRAILING EDGE	DIAMETER	0.4191	0.4289	0.4485	0.4681	0.4877	0.5073	0.5171	
	P-TOTAL	12.409	12.410	12.368	12.317	12.235	12.072	11.980	12.276
ROTOR PLUS STATOR	T-TOTAL	311.07	309.50	306.47	305.92	305.71	306.17	306.46	306.73
	P-STATIC	11.070	11.072	11.066	11.050	11.028	11.001	10.986	
PR = 1.2145	BETABAR	15.750	13.413	8.430	7.933	9.246	9.008	8.821	
TR = 1.0644	EPSILON	-0.000	-0.874	-2.166	-3.238	-4.370	-5.604	-6.309	
EFF-A = 0.8864	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8845	V-BAR	141.639	141.177	138.773	136.987	133.998	126.935	122.999	
	VZ-BAR	136.321	137.320	137.268	135.675	132.257	125.370	121.544	
	V-THET-BAR	38.447	32.749	20.346	18.905	21.529	19.874	18.862	
IGV,ROTOR,STATOR	MACH-BAR	0.407	0.407	0.402	0.397	0.388	0.367	0.355	
	EFF-POLY	0.886	0.905	0.914	0.910	0.889	0.800	0.810	
PR = 1.2117	INCID-M	-3.2	-2.6	-8.0	-8.8	-10.0	-11.0	-11.6	
TR = 1.0644	DEVIATION	15.0	12.0	7.6	7.6	10.0	11.1	12.0	
EFF-A = 0.8788	OMEGA-BAR	0.061	0.054	0.046	0.039	0.045	0.085	0.079	
EFF-P = 0.8789	LOSS PAR	0.021	0.019	0.016	0.015	0.019	0.036	0.034	
	D-FACTOR	0.492	0.481	0.459	0.447	0.437	0.466	0.469	
	TURNING	36.7	36.6	34.4	33.8	32.4	33.8	34.1	

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Table B-2. Base Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 10)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.4191	0.4352	0.4675	0.4998	0.5321	0.5644	0.5805	
	P-TOTAL	9.921	10.141	10.141	10.138	10.135	10.140	9.970	10.132
WCOR=10.498	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 766.5	P-STATIC	9.835	9.833	9.833	9.834	9.835	9.837	9.839	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.517	-3.082	-4.564	-5.955	-7.229	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	37.918	71.209	71.207	70.882	70.388	71.401	46.744	
	VZ-BAR	37.918	71.209	71.207	70.882	70.388	71.401	46.744	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.112	0.210	0.210	0.209	0.208	0.211	0.138	
IGV TRAILING EDGE	DIAMETER	0.4191	0.4342	0.4643	0.4945	0.5246	0.5548	0.5698	
	P-TOTAL	9.904	10.111	10.126	10.116	10.123	10.128	9.957	10.113
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.739	9.743	9.745	9.747	9.750	9.755	9.753	
	BETABAR	11.476	10.818	11.461	12.037	12.460	13.063	14.226	
	EPSILON	-0.000	-1.172	-2.830	-4.390	-5.845	-7.179	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	52.722	78.023	79.387	78.175	78.509	78.632	58.463	
	VZ-BAR	51.663	76.637	77.804	76.457	76.660	76.597	56.670	
	V-THET-BAR	10.489	14.645	15.773	16.302	16.939	17.772	14.367	
	MACH-BAR	0.155	0.230	0.235	0.231	0.232	0.232	0.172	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	26.1	
	DEVIATION	-1.5	-2.7	-3.1	-3.6	-4.2	-4.7	-4.0	
	OMEGABAR	0.197	0.098	0.048	0.074	0.043	0.059	0.095	
	TURNING	-11.5	-10.8	-11.5	-12.0	-12.5	-13.1	-14.2	
ROTOR LEADING EDGE	DIAMETER	0.4191	0.4314	0.4561	0.4808	0.5055	0.5302	0.5425	
	P-TOTAL	9.904	10.113	10.125	10.116	10.123	10.130	9.957	10.113
WCOR=10.517	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 766.5	P-STATIC	9.479	9.478	9.477	9.476	9.478	9.481	9.482	
	BETABAR	7.096	8.207	8.884	9.335	9.750	10.289	9.689	
	EPSILON	-0.000	-0.931	-2.487	-4.384	-6.140	-7.088	-7.241	
	K-BAR	0.946	0.946	0.946	0.946	0.946	0.946	0.946	
	V-BAR	84.904	103.058	104.143	103.499	103.660	104.156	89.663	
	VZ-BAR	84.253	101.987	102.894	102.129	102.359	102.481	88.384	
	V-THET-BAR	10.469	14.820	16.083	16.788	17.589	18.603	15.091	
	MACH-BAR	0.251	0.306	0.309	0.307	0.308	0.309	0.265	
	U-WHEEL	160.626	165.357	174.819	184.281	193.744	203.206	207.937	
	V-BAR-PR	172.162	181.832	189.170	196.175	203.736	211.143	212.136	
	BETABAR-PR	60.700	55.883	57.047	58.627	59.840	60.963	65.377	
	V-THET-B-P	-150.137	-150.537	-158.736	-167.494	-176.135	-184.603	-192.847	
	MACH-BAR-P	0.509	0.539	0.561	0.582	0.604	0.626	0.628	
ROTOR TRAILING EDGE	DIAMETER	0.4191	0.4304	0.4531	0.4758	0.4985	0.5212	0.5325	
	P-TOTAL	12.802	12.756	12.683	12.610	12.511	12.334	12.206	12.579
ROTOR	T-TOTAL	311.57	310.34	307.75	307.04	306.87	307.80	308.31	307.92
	P-STATIC	10.332	10.415	10.553	10.660	10.746	10.826	10.868	
PR = 1.2459	BETABAR	54.390	53.153	48.720	45.403	46.005	51.355	53.617	
TR = 1.0685	EPSILON	-0.000	-0.934	-2.403	-4.054	-5.660	-6.799	-7.367	
EFF-A = 0.9410	K-BAR	0.892	0.892	0.892	0.892	0.892	0.892	0.892	
EFF-P = 0.9405	V-BAR	192.616	187.314	177.874	170.059	161.934	150.363	142.189	
	VZ-BAR	112.270	112.305	121.931	119.401	112.481	93.910	84.343	
	V-THET-BAR	156.759	149.894	129.493	121.093	116.489	117.418	114.473	
	MACH-BAR	0.562	0.546	0.519	0.496	0.471	0.436	0.411	
	U-WHEEL	160.626	164.972	173.666	182.359	191.052	199.745	204.092	
	V-BAR-PR	112.336	113.361	129.711	134.205	134.958	124.913	123.066	
	BETABAR-PR	1.973	7.622	19.899	27.163	33.544	41.249	46.737	
	V-THET-B-P	-3.867	-15.078	-44.172	-61.266	-74.563	-82.327	-89.619	
	MACH-BAR-P	0.327	0.330	0.379	0.391	0.393	0.362	0.355	
	D-FACTOR	0.644	0.644	0.541	0.529	0.541	0.612	0.627	
	TURNING	58.7	48.3	37.1	31.5	26.3	19.7	18.6	
	INCID-M	3.1	-0.4	1.8	3.1	3.0	2.4	6.3	
	DEVIATION	14.4	11.7	11.2	9.1	8.2	9.7	12.1	
	OMEGABAR-P	0.101	0.150	0.023	0.007	0.038	0.134	0.137	
	LOSS PAR	0.035	0.053	0.008	0.003	0.013	0.044	0.042	
	PT-RATIO	1.293	1.261	1.253	1.247	1.235	1.220	1.226	1.245
	EFF-AD	0.938	0.892	0.981	0.994	0.960	0.857	0.858	0.941
	EFF-POLY	0.939	0.894	0.980	0.993	0.960	0.860	0.861	0.940
STATOR LEADING EDGE	DIAMETER	0.4191	0.4300	0.4519	0.4737	0.4956	0.5174	0.5283	
	P-TOTAL	12.802	12.756	12.685	12.613	12.516	12.339	12.206	12.579
	T-TOTAL	311.57	310.36	307.79	307.04	306.85	307.78	308.31	307.92
	P-STATIC	10.184	10.259	10.390	10.491	10.577	10.644	10.673	
	BETABAR	51.976	50.710	44.633	43.149	43.426	47.081	49.097	
	EPSILON	-0.000	-0.910	-2.519	-3.960	-5.164	-6.497	-7.358	
	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
	V-BAR	198.996	193.965	185.128	177.817	170.156	159.892	152.657	
	VZ-BAR	122.581	122.805	131.727	129.732	125.579	107.652	99.957	
	V-THET-BAR	156.759	150.117	130.063	121.608	116.966	118.218	115.381	
	MACH-BAR	0.581	0.567	0.542	0.520	0.496	0.464	0.442	
STATOR TRAILING EDGE	DIAMETER	0.4191	0.4289	0.4485	0.4681	0.4877	0.5073	0.5171	
	P-TOTAL	12.501	12.505	12.515	12.451	12.354	12.220	12.150	12.406
ROTOR PLUS STATOR	T-TOTAL	311.57	310.30	307.74	307.05	306.84	307.73	308.31	307.92
	P-STATIC	11.236	11.238	11.235	11.222	11.204	11.182	11.170	
PR = 1.2267	BETABAR	15.867	14.380	11.218	10.889	11.329	9.507	8.484	
TR = 1.0685	EPSILON	-0.000	-0.778	-2.004	-2.976	-3.987	-5.325	-6.309	
EFF-A = 0.8776	K-BAR	0.862	0.862	0.862	0.862	0.862	0.862	0.862	
EFF-P = 0.8807	V-BAR	137.107	136.868	136.999	134.318	130.259	124.392	121.243	
	VZ-BAR	131.883	132.578	134.380	131.900	127.721	122.684	119.917	
	V-THET-BAR	37.487	33.990	26.652	25.374	25.588	20.546	17.887	
IGV,ROTOR,STATOR	MACH-BAR	0.393	0.394	0.396	0.388	0.376	0.358	0.349	
	EFF-POLY	0.804	0.824	0.857	0.837	0.815	0.842	0.906	
PR = 1.2245	INCID-M	-3.6	-1.9	-0.2	-7.4	-8.1	-8.2	-4.8	
TR = 1.0685	DEVIATION	15.1	13.0	10.4	10.5	12.0	11.6	11.6	
EFF-A = 0.8719	OMEGA-BAR	0.115	0.101	0.074	0.076	0.084	0.070	0.037	
EFF-P = 0.8728	LOSS PAR	0.039	0.036	0.028	0.030	0.034	0.030	0.016	
	D-FACTOR	0.524	0.512	0.473	0.463	0.462	0.492	0.493	
	TURNING	36.1	36.3	33.4	32.3	32.1	38.2	40.6	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units

(Data Point No. 11)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.561	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3574.3	P-STATIC	9.344	9.365	9.349	9.358	9.370	9.387	9.397	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.926	-2.631	-4.234	-5.784	-7.288	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	114.992	114.942	114.623	113.979	113.017	111.732	110.950	
	VZ-BAR	114.992	114.942	114.623	113.979	113.017	111.732	110.950	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.342	0.342	0.341	0.339	0.336	0.332	0.329	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.093	10.093	10.100	10.118	10.117	10.116	10.114	10.110
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	8.993	8.995	9.002	9.014	9.026	9.041	9.049	
	BETABAR	8.406	10.072	11.623	12.205	11.952	9.571	5.526	
	EPSILON	-0.000	-0.887	-2.564	-4.166	-5.714	-7.282	-8.118	
	K-BAR	0.945	0.945	0.945	0.945	0.944	0.944	0.945	
	V-BAR	136.996	136.889	136.828	137.117	136.254	135.216	134.546	
	VZ-BAR	135.524	134.777	134.022	134.018	133.300	133.328	133.920	
	V-THET-BAR	20.027	23.938	27.566	28.987	28.216	22.482	12.955	
	MACH-BAR	0.409	0.409	0.409	0.410	0.407	0.404	0.402	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.3	-5.9	-9.7	-14.4	
	OMEGABAR	0.049	0.049	0.040	0.018	0.019	0.021	0.024	
	TURNING	-8.4	-10.1	-11.6	-12.2	-12.0	-9.6	-5.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.093	10.093	10.100	10.118	10.117	10.116	10.114	10.110
WCOR= 1.565	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3574.3	P-STATIC	8.247	8.254	8.262	8.267	8.273	8.275	8.272	
	BETABAR	6.376	7.717	9.001	9.535	9.372	7.504	4.344	
	EPSILON	-1.170	-1.800	-3.337	-4.716	-5.934	-6.855	-6.637	
	K-BAR	0.945	0.945	0.945	0.945	0.945	0.945	0.945	
	V-BAR	180.149	179.793	179.732	180.168	179.845	179.679	179.730	
	VZ-BAR	179.034	178.163	177.519	177.679	177.444	178.136	179.213	
	V-THET-BAR	20.011	24.140	28.118	29.845	29.287	23.465	13.613	
	MACH-BAR	0.545	0.544	0.543	0.545	0.544	0.543	0.543	
	U-WHEEL	227.967	234.753	248.325	261.898	275.470	289.043	295.829	
	V-BAR-PR	274.406	275.862	282.851	292.265	303.469	319.790	334.310	
	BETABAR-PR	49.274	49.771	51.126	52.559	54.216	56.147	57.584	
	V-THET-B-P	-207.956	-210.612	-220.207	-232.053	-246.183	-265.578	-282.216	
	MACH-BAR-P	0.830	0.834	0.855	0.884	0.918	0.967	1.011	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.412	14.619	14.751	14.499	14.311	13.933	13.090	14.406
ROTOR	T-TOTAL	322.46	322.25	323.24	321.60	322.32	323.53	324.76	322.60
-----	P-STATIC	9.686	9.762	9.953	10.150	10.307	10.461	10.527	
PR = 1.4250	BETABAR	41.045	40.384	41.030	39.912	40.401	40.724	44.851	
TR = 1.1195	EPSILON	-2.885	-2.587	-3.363	-4.672	-5.728	-6.493	-6.418	
EFF-A = 0.8919	K-BAR	0.830	0.830	0.830	0.830	0.830	0.830	0.830	
EFF-P = 0.8965	V-BAR	263.665	265.612	262.767	250.158	240.739	226.004	198.455	
	VZ-BAR	198.855	202.323	198.224	191.877	183.330	171.291	140.694	
	V-THET-BAR	173.136	172.090	172.494	160.506	156.031	147.428	139.963	
	MACH-BAR	0.775	0.782	0.771	0.732	0.701	0.653	0.567	
	U-WHEEL	225.289	231.897	245.116	258.334	271.553	284.772	291.381	
	V-BAR-PR	205.580	210.981	211.119	215.391	216.694	219.591	206.693	
	BETABAR-PR	14.696	16.467	20.121	27.014	32.216	38.729	47.103	
	V-THET-B-P	-52.153	-59.807	-72.622	-97.829	-115.522	-137.343	-151.418	
	MACH-BAR-P	0.604	0.621	0.620	0.630	0.631	0.634	0.590	
	D-FACTOR	0.445	0.427	0.446	0.442	0.462	0.486	0.550	
	TURNING	34.6	33.3	31.0	25.5	22.0	17.4	10.5	
	INCID-M	-8.1	-6.4	-4.1	-3.0	-2.7	-2.5	-2.2	
	DEVIATION	26.6	20.2	11.5	9.3	7.0	7.5	13.3	
	OMEGABAR-P	0.100	0.055	0.060	0.059	0.103	0.176	0.305	
	LOSS PAR	0.034	0.019	0.021	0.021	0.036	0.060	0.093	
	PT-RATIO	1.428	1.448	1.460	1.433	1.415	1.377	1.294	1.4250
	EFF-AD	0.901	0.945	0.939	0.933	0.879	0.781	0.603	0.8919
	EFF-POLY	0.905	0.947	0.942	0.936	0.885	0.790	0.616	0.8965
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.412	14.616	14.753	14.505	14.315	13.951	13.090	14.406
	T-TOTAL	322.46	322.24	323.24	321.63	322.29	323.50	324.76	322.60
	P-STATIC	9.680	9.697	9.809	9.960	10.105	10.273	10.329	
	BETABAR	41.074	40.101	40.325	38.962	39.293	39.557	43.024	
	EPSILON	-0.113	-1.168	-2.945	-4.171	-5.508	-7.022	-7.979	
	K-BAR	0.830	0.830	0.830	0.830	0.830	0.830	0.830	
	V-BAR	263.883	267.577	267.334	256.518	247.649	233.235	206.612	
	VZ-BAR	198.931	204.672	203.811	199.457	191.662	179.829	151.046	
	V-THET-BAR	173.380	172.356	172.999	161.302	156.831	148.523	140.973	
	MACH-BAR	0.776	0.788	0.786	0.753	0.723	0.676	0.592	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.353	13.821	14.125	13.946	13.997	13.260	12.320	13.812
ROTOR PLUS STATOR	T-TOTAL	322.46	322.24	323.24	321.64	322.30	323.52	324.76	322.60
----------	P-STATIC	11.300	11.306	11.299	11.265	11.224	11.161	11.125	
PR = 1.3662	BETABAR	14.337	13.599	12.143	12.071	12.224	11.446	9.623	
TR = 1.1195	EPSILON	0.450	-0.164	-1.251	-2.460	-3.647	-4.884	-5.489	
EFF-A = 0.7804	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.7899	V-BAR	173.733	189.955	200.333	195.565	198.936	176.632	136.877	
	VZ-BAR	168.322	184.631	195.851	191.241	194.425	173.115	134.952	
	V-THET-BAR	43.021	44.653	42.141	40.898	42.120	35.069	22.880	
IGV,ROTOR,STATOR	MACH-BAR	0.494	0.543	0.574	0.561	0.570	0.502	0.384	
----------	EFF-POLY	0.668	0.731	0.763	0.756	0.822	0.618	0.549	
PR = 1.3633	INCID-M	-14.6	-12.5	-10.5	-11.5	-12.2	-14.1	-11.8	
TR = 1.1195	DEVIATION	13.6	12.3	11.3	11.7	12.9	13.4	12.6	
EFF-A = 0.7756	OMEGA-BAR	0.224	0.162	0.127	0.123	0.076	0.188	0.279	
EFF-P = 0.7844	LOSS PAR	0.077	0.057	0.047	0.048	0.031	0.080	0.121	
	D-FACTOR	0.517	0.464	0.438	0.427	0.392	0.456	0.594	
	TURNING	26.7	26.5	28.2	26.9	27.1	28.1	33.4	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 12)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.562	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3577.5	P-STATIC	9.343	9.344	9.348	9.357	9.369	9.386	9.396	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.611	-4.224	-5.770	-7.290	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	115.074	115.029	114.708	114.064	113.101	111.803	111.021	
	VZ-BAR	115.074	115.029	114.708	114.064	113.101	111.803	111.021	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.342	0.342	0.341	0.339	0.336	0.332	0.330	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.093	10.093	10.100	10.118	10.117	10.116	10.113	10.109
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	8.977	8.979	8.987	8.998	9.011	9.026	9.035	
	BETABAR	8.415	10.082	11.631	12.210	11.956	9.584	5.526	
	EPSILON	-6.000	-0.879	-2.560	-4.159	-5.739	-7.291	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	138.007	137.897	137.826	138.101	137.222	136.186	135.507	
	VZ-BAR	136.521	135.766	134.995	134.977	134.245	134.280	134.678	
	V-THET-BAR	20.195	24.139	27.786	29.208	28.426	22.674	13.048	
	MACH-BAR	0.412	0.412	0.412	0.413	0.410	0.407	0.405	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.3	-5.9	-9.7	-14.4	
	OMEGABAR	0.049	0.049	0.040	0.018	0.019	0.021	0.024	
	TURNING	-8.4	-10.1	-11.6	-12.2	-12.0	-9.6	-5.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.093	10.093	10.100	10.118	10.117	10.116	10.113	10.109
WCOR= 1.566	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3577.5	P-STATIC	8.215	8.223	8.231	8.238	8.245	8.249	8.245	
	BETABAR	6.372	7.711	8.994	9.528	9.366	7.510	4.341	
	EPSILON	-1.170	-1.818	-3.418	-4.921	-6.119	-6.834	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	181.809	181.433	181.347	181.710	181.306	181.086	181.134	
	VZ-BAR	180.686	179.790	179.117	179.204	178.889	179.528	180.614	
	V-THET-BAR	20.179	24.343	28.350	30.079	29.506	23.666	13.711	
	MACH-BAR	0.550	0.549	0.549	0.550	0.548	0.548	0.548	
	U-WHEEL	228.174	234.966	248.551	262.135	275.721	289.305	296.098	
	V-BAR-PR	275.516	276.924	283.852	293.198	304.343	320.619	335.207	
	BETABAR-PR	49.019	49.515	50.874	52.322	53.999	55.946	57.347	
	V-THET-B-P	-207.995	-210.623	-220.261	-232.657	-246.215	-265.640	-282.387	
	MACH-BAR-P	0.834	0.838	0.859	0.887	0.921	0.970	1.014	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.931	14.600	14.774	14.554	14.281	13.950	13.090	14.411
ROTOR	T-TOTAL	322.46	322.65	323.48	322.45	323.52	324.96	324.76	323.40
-----	P-STATIC	9.965	10.049	10.250	10.431	10.585	10.739	10.805	
PR = 1.4255	BETABAR	45.411	42.775	43.154	42.552	44.060	44.742	48.614	
TR = 1.1223	EPSILON	-2.886	-2.655	-3.602	-4.698	-5.802	-6.582	-6.418	
EFF-A = 0.8729	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.8781	V-BAR	243.157	256.126	253.894	242.481	230.880	216.765	186.528	
	VZ-BAR	170.703	188.008	185.221	178.627	165.913	153.979	123.319	
	V-THET-BAR	173.167	173.931	173.653	163.979	160.556	152.566	139.948	
	MACH-BAR	0.709	0.750	0.742	0.706	0.668	0.623	0.531	
	U-WHEEL	225.493	232.108	245.339	258.569	271.800	285.030	291.645	
	V-BAR-PR	178.539	196.804	198.620	202.133	199.756	203.107	195.499	
	BETABAR-PR	17.042	17.192	21.159	27.903	33.841	40.709	50.892	
	V-THET-B-P	-52.326	-58.177	-71.685	-94.590	-111.243	-132.465	-151.696	
	MACH-BAR-P	0.520	0.576	0.580	0.589	0.578	0.584	0.556	
	D-FACTOR	0.545	0.482	0.494	0.493	0.525	0.545	0.584	
	TURNING	32.0	32.3	29.7	24.4	20.2	15.2	6.5	
	INCID-M	-8.4	-6.6	-4.4	-3.2	-2.9	-2.7	-2.4	
	DEVIATION	26.9	20.9	12.6	10.2	8.7	9.5	17.0	
	OMEGABAR-P	0.186	0.070	0.062	0.072	0.135	0.203	0.304	
	LOSS PAR	0.062	0.024	0.022	0.025	0.047	0.068	0.086	
	PT-RATIO	1.380	1.447	1.463	1.438	1.412	1.379	1.294	1.4255
	EFF-AD	0.811	0.930	0.937	0.920	0.844	0.753	0.602	0.8729
	EFF-POLY	0.819	0.933	0.940	0.924	0.851	0.764	0.616	0.8781
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.931	14.590	14.778	14.562	14.285	13.963	13.090	14.411
	T-TOTAL	322.46	322.64	323.48	322.47	323.48	324.96	324.76	323.40
	P-STATIC	9.982	10.010	10.125	10.279	10.433	10.602	10.672	
	BETABAR	45.635	42.638	42.464	41.685	43.072	43.783	47.138	
	EPSILON	-0.113	-1.051	-2.630	-3.942	-5.394	-7.065	-7.979	
	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
	V-BAR	242.566	257.168	257.954	247.731	236.245	222.204	192.303	
	VZ-BAR	169.610	189.191	190.294	185.007	172.577	160.432	130.810	
	V-THET-BAR	173.412	174.181	174.150	164.751	161.334	153.738	140.958	
	MACH-BAR	0.707	0.754	0.755	0.723	0.685	0.639	0.548	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.353	13.931	14.269	14.102	13.979	13.484	12.320	13.931
ROTOR PLUS STATOR	T-TOTAL	322.46	322.63	323.47	322.49	323.45	324.96	324.76	323.40
----------	P-STATIC	11.502	11.511	11.504	11.473	11.434	11.377	11.340	
PR = 1.3780	BETABAR	14.309	13.398	11.994	12.080	12.266	11.336	9.697	
TR = 1.1223	EPSILON	0.450	-0.122	-1.205	-2.348	-3.557	-4.889	-5.489	
EFF-A = 0.7847	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.7942	V-BAR	164.421	185.371	196.953	192.582	190.433	175.734	123.534	
	VZ-BAR	159.320	180.328	192.654	188.318	186.085	172.300	121.769	
	V-THET-BAR	40.637	42.936	40.927	40.301	40.459	34.566	20.808	
IGV,ROTOR,STATOR	MACH-BAR	0.467	0.529	0.563	0.551	0.544	0.498	0.346	
----------	EFF-POLY	0.769	0.750	0.783	0.771	0.809	0.667	0.500	
PR = 1.3750	INCID-M	-10.0	-10.0	-8.4	-8.8	-8.4	-9.8	-7.6	
TR = 1.1223	DEVIATION	13.5	12.1	11.1	11.7	12.9	13.3	12.6	
EFF-A = 0.7800	OMEGA-BAR	0.146	0.144	0.109	0.107	0.079	0.142	0.319	
EFF-P = 0.7868	LOSS PAR	0.050	0.051	0.041	0.042	0.032	0.060	0.139	
	D-FACTOR	0.516	0.464	0.435	0.426	0.410	0.444	0.636	
	TURNING	31.3	29.2	30.5	29.6	30.8	32.4	37.4	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 13)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.550	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3574.8	P-STATIC	9.356	9.357	9.361	9.370	9.382	9.399	9.409	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.638	-4.252	-5.795	-7.295	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	114.094	114.044	113.717	113.072	112.101	110.818	110.043	
	VZ-BAR	114.094	114.044	113.717	113.072	112.101	110.818	110.043	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.339	0.339	0.338	0.336	0.333	0.329	0.327	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.093	10.094	10.101	10.118	10.115	10.117	10.115	10.110
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.026	9.028	9.035	9.045	9.058	9.072	9.079	
	BETABAR	8.394	10.057	11.604	12.189	11.947	9.674	5.523	
	EPSILON	-0.000	-0.910	-2.573	-4.198	-5.759	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	134.893	134.811	134.786	135.087	134.266	133.269	132.631	
	VZ-BAR	133.448	132.737	132.031	132.041	131.358	131.368	132.015	
	V-THET-BAR	19.692	23.540	27.111	28.521	27.793	22.394	12.764	
	MACH-BAR	0.403	0.402	0.402	0.403	0.401	0.398	0.396	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.3	-5.9	-9.6	-14.4	
	OMEGABAR	0.049	0.048	0.039	0.017	0.018	0.020	0.023	
	TURNING	-8.4	-10.1	-11.6	-12.2	-11.9	-9.7	-5.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.093	10.094	10.102	10.118	10.118	10.117	10.115	10.110
WCOR= 1.553	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3574.8	P-STATIC	8.368	8.315	8.323	8.328	8.332	8.333	8.330	
	BETABAR	6.384	7.725	9.014	9.553	9.395	7.603	4.353	
	EPSILON	-1.170	-1.783	-3.215	-4.572	-5.702	-6.495	-6.657	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	176.965	176.608	176.539	176.482	176.756	176.680	176.728	
	VZ-BAR	175.868	175.003	174.359	174.528	174.365	175.123	176.219	
	V-THET-BAR	19.676	23.739	27.660	29.371	28.853	23.374	13.412	
	MACH-BAR	0.535	0.533	0.533	0.535	0.534	0.534	0.534	
	U-WHEEL	226.000	234.787	248.362	261.936	275.511	289.085	295.873	
	V-BAR-PR	272.633	274.167	281.267	290.770	302.078	318.233	332.922	
	BETABAR-PR	49.829	50.334	51.690	53.113	54.739	56.611	58.041	
	V-THET-B-P	-208.324	-211.046	-220.702	-232.565	-246.658	-265.711	-282.460	
	MACH-BAR-P	0.824	0.828	0.849	0.878	0.912	0.961	1.006	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.123	14.614	14.933	14.605	14.639	14.354	14.001	14.612
ROTOR	T-TOTAL	323.24	323.17	324.04	322.71	324.91	326.61	327.04	324.32
	P-STATIC	10.041	10.126	10.329	10.514	10.696	10.874	10.957	
PR = 1.4452	BETABAR	45.867	43.720	43.381	42.955	44.280	45.236	44.442	
TR = 1.1255	EPSILON	-2.886	-2.621	-3.366	-4.396	-5.428	-6.302	-6.418	
EFF-A = 0.8862	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
EFF-P = 0.8901	V-BAR	245.567	254.163	255.105	241.060	236.579	223.679	210.805	
	VZ-BAR	170.996	183.694	185.411	176.431	169.377	157.513	150.506	
	V-THET-BAR	176.249	175.652	175.217	164.263	165.169	158.814	147.604	
	MACH-BAR	0.715	0.743	0.745	0.701	0.685	0.642	0.662	
	U-WHEEL	225.322	231.931	245.152	258.372	271.593	284.813	291.423	
	V-BAR-PR	177.896	192.123	198.177	199.976	200.041	201.714	208.173	
	BETABAR-PR	16.013	17.631	20.665	28.076	32.143	36.657	43.699	
	V-THET-B-P	-49.073	-56.279	-69.934	-94.110	-106.424	-125.999	-143.819	
	MACH-BAR-P	0.518	0.562	0.579	0.582	0.579	0.579	0.595	
	D-FACTOR	0.547	0.497	0.493	0.497	0.526	0.553	0.554	
	TURNING	33.8	33.3	31.0	25.0	22.6	18.0	14.3	
	INCID-M	-7.6	-5.8	-3.6	-2.4	-2.2	-2.0	-1.7	
	DEVIATION	27.9	20.8	12.1	10.4	7.0	7.4	9.8	
	OMEGABAR-P	0.177	0.084	0.051	0.072	0.116	0.185	0.230	
	LOSS PAR	0.059	0.029	0.018	0.025	0.041	0.064	0.075	
	P1-RATIO	1.399	1.448	1.476	1.443	1.447	1.419	1.384	1.4452
	EFF-AD	0.828	0.918	0.949	0.922	0.873	0.788	0.722	0.8862
	EFF-POLY	0.836	0.922	0.952	0.926	0.879	0.798	0.734	0.8901
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.123	14.606	14.936	14.610	14.639	14.358	14.001	14.612
	T-TOTAL	323.24	323.17	324.05	322.71	324.85	326.60	327.04	324.32
	P-STATIC	10.036	10.080	10.209	10.355	10.523	10.694	10.772	
	BETABAR	45.913	43.523	42.744	42.023	43.200	44.024	43.054	
	EPSILON	-0.113	-1.061	-2.378	-4.082	-5.504	-6.979	-7.979	
	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
	V-BAR	245.722	255.477	258.948	246.428	242.337	230.140	217.770	
	VZ-BAR	170.962	185.250	190.169	183.066	176.657	165.481	159.127	
	V-THET-BAR	176.498	175.921	175.754	164.965	165.888	159.939	148.670	
	MACH-BAR	0.716	0.747	0.758	0.719	0.703	0.662	0.624	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.596	14.035	14.493	14.313	14.269	13.771	13.383	14.164
ROTOR PLUS STATOR	T-TOTAL	323.24	323.16	324.05	322.71	324.85	326.61	327.04	324.32
	P-STATIC	11.805	11.812	11.808	11.780	11.741	11.687	11.657	
PR = 1.4009	BETABAR	14.556	13.620	12.252	12.458	12.733	11.876	10.339	
TR = 1.1255	EPSILON	0.450	-0.136	-1.338	-2.512	-3.725	-4.911	-5.489	
EFF-A = 0.8058	K-BAR	0.912	0.912	0.912	0.912	0.912	0.912	0.912	
EFF-P = 0.8149	V-BAR	160.270	176.612	192.371	187.331	188.043	173.343	159.439	
	VZ-BAR	155.126	171.648	187.989	182.920	183.419	169.632	156.851	
	V-THET-BAR	40.279	41.573	40.824	40.412	41.445	35.675	28.614	
IGV,ROTOR,STATOR	MACH-BAR	0.454	0.502	0.549	0.535	0.535	0.490	0.449	
	EFF-POLY	0.809	0.798	0.827	0.861	0.809	0.679	0.635	
PR = 1.3980	INCID-M	-9.7	-9.1	-8.1	-8.5	-8.3	-9.6	-11.7	
TR = 1.1255	DEVIATION	13.8	12.3	11.4	12.1	13.4	13.9	13.3	
EFF-A = 0.8028	OMEGA-BAR	0.129	0.126	0.094	0.070	0.090	0.160	0.191	
EFF-P = 0.8098	LOSS PAR	0.044	0.045	0.035	0.027	0.036	0.068	0.083	
	D-FACTOR	0.544	0.500	0.457	0.443	0.440	0.484	0.516	
	TURNING	31.4	29.9	30.5	29.6	30.5	32.1	32.7	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 14)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.541	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3570.3	P-STATIC	9.366	9.367	9.371	9.380	9.392	9.408	9.418	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.667	-4.256	-5.809	-7.295	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	113.339	113.288	112.953	112.319	111.363	110.087	109.317	
	VZ-BAR	113.339	113.288	112.953	112.319	111.363	110.087	109.317	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.337	0.337	0.336	0.334	0.331	0.327	0.325	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.094	10.095	10.102	10.119	10.119	10.117	10.115	10.111
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.029	9.030	9.037	9.047	9.060	9.074	9.081	
	BETABAR	8.398	10.062	11.610	12.184	11.943	9.673	5.521	
	EPSILON	-0.000	-0.910	-2.597	-4.195	-5.761	-7.291	-8.116	
	K-BAR	0.945	0.945	0.945	0.945	0.944	0.944	0.945	
	V-BAR	134.755	134.683	134.667	134.977	134.160	133.157	132.527	
	VZ-BAR	133.310	132.609	131.911	131.936	131.256	131.259	131.913	
	V-THET-BAR	19.681	23.529	27.161	28.487	27.762	22.373	12.749	
	MACH-BAR	0.402	0.402	0.402	0.403	0.400	0.397	0.395	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.3	-5.9	-9.6	-14.4	
	OMEGABAR	0.049	0.048	0.038	0.017	0.017	0.019	0.023	
	TURNING	-8.4	-10.1	-11.6	-12.2	-11.9	-9.7	-5.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.094	10.095	10.103	10.119	10.119	10.117	10.115	10.111
WCOR= 1.544	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3570.3	P-STATIC	8.312	8.319	8.326	8.332	8.337	8.338	8.335	
	BETABAR	6.387	7.728	9.019	9.551	9.395	7.605	4.353	
	EPSILON	-1.170	-1.800	-3.302	-4.690	-5.782	-6.538	-6.637	
	K-BAR	0.945	0.945	0.945	0.945	0.945	0.945	0.945	
	V-BAR	176.788	176.461	176.400	176.820	176.546	176.447	176.514	
	VZ-BAR	175.690	174.857	174.219	174.369	174.178	174.891	176.005	
	V-THET-BAR	19.665	23.728	27.653	29.337	28.820	23.351	13.347	
	MACH-BAR	0.534	0.533	0.533	0.534	0.533	0.533	0.533	
	U-WHEEL	227.713	234.491	248.049	261.606	275.164	288.721	295.500	
	V-BAR-PR	272.307	273.854	280.940	290.438	301.702	317.820	332.505	
	BETABAR-PR	49.820	50.319	51.674	53.103	54.737	56.612	58.040	
	V-THET-B-P	-208.048	-210.763	-220.396	-232.269	-246.344	-265.370	-282.103	
	MACH-BAR-P	0.822	0.827	0.848	0.877	0.911	0.960	1.004	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.234	14.685	14.910	14.737	14.622	14.509	14.174	14.678
ROTOR	T-TOTAL	325.76	323.60	324.14	323.81	325.52	327.26	327.91	324.81
PR = 1.4516	P-STATIC	10.270	10.379	10.582	10.771	10.943	11.122	11.204	
TR = 1.1272	BETABAR	47.964	45.042	45.516	45.608	47.315	47.306	46.782	
EFF-A = 0.8859	EPSILON	-2.865	-2.587	-3.282	-4.485	-5.525	-6.265	-6.418	
EFF-P = 0.8896	K-BAR	0.912	0.912	0.912	0.912	0.912	0.912	0.912	
	V-BAR	240.659	247.473	246.489	236.101	227.978	219.290	206.863	
	VZ-BAR	161.145	174.864	172.717	165.168	154.562	148.698	141.656	
	V-THET-BAR	178.743	175.109	175.856	168.709	167.584	161.174	150.751	
	MACH-BAR	0.699	0.722	0.717	0.684	0.657	0.628	0.589	
	U-WHEEL	225.036	231.639	244.843	258.047	271.251	284.454	291.056	
	V-BAR-PR	167.663	183.776	185.996	187.794	186.113	193.158	199.379	
	BETABAR-PR	16.029	17.910	21.774	28.408	33.850	39.661	44.726	
	V-THET-B-P	-46.295	-56.530	-68.987	-89.337	-103.667	-123.281	-140.305	
	MACH-BAR-P	0.487	0.536	0.541	0.544	0.536	0.553	0.566	
	D-FACTOR	0.587	0.526	0.537	0.544	0.575	0.583	0.584	
	TURNING	33.8	32.4	29.9	24.7	20.9	17.0	13.3	
	INCID-M	-7.6	-5.8	-3.6	-2.4	-2.2	-2.0	-1.7	
	DEVIATION	27.9	21.7	13.2	10.7	8.7	8.4	10.9	
	OMEGABAR-P	0.171	0.066	0.059	0.079	0.133	0.178	0.225	
	LOSS PAR	0.058	0.023	0.021	0.028	0.047	0.060	0.072	
	PT-RATIO	1.416	1.455	1.476	1.456	1.445	1.434	1.401	1.4516
	EFF-AD	0.836	0.935	0.942	0.917	0.856	0.800	0.734	0.8859
	EFF-POLY	0.843	0.938	0.945	0.921	0.863	0.810	0.746	0.8896
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.234	14.677	14.911	14.742	14.624	14.512	14.174	14.678
	T-TOTAL	323.76	323.00	324.13	323.80	325.47	327.24	327.91	324.81
	P-STATIC	10.296	10.356	10.485	10.640	10.796	10.972	11.052	
	BETABAR	48.294	45.010	44.919	44.765	46.259	46.258	45.578	
	EPSILON	-0.113	-0.998	-2.593	-3.954	-5.327	-6.964	-7.979	
	K-BAR	0.912	0.912	0.912	0.912	0.912	0.912	0.912	
	V-BAR	239.759	248.045	249.662	240.563	233.038	224.682	212.600	
	VZ-BAR	159.514	175.367	176.789	170.800	161.125	155.348	148.808	
	V-THET-BAR	178.995	175.410	176.285	169.404	168.360	162.324	151.839	
	MACH-BAR	0.696	0.724	0.727	0.699	0.673	0.645	0.607	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.707	14.104	14.603	14.436	14.393	13.940	13.596	14.287
ROTOR PLUS STATOR	T-TOTAL	323.76	323.01	324.10	323.80	325.45	327.25	327.91	324.81
	P-STATIC	12.005	12.012	12.011	11.984	11.949	11.897	11.867	
PR = 1.4130	BETABAR	14.917	13.532	12.464	12.615	12.773	11.562	11.286	
TR = 1.1272	EPSILON	0.450	-0.066	-1.195	-2.369	-3.639	-4.886	-5.489	
EFF-A = 0.8165	K-BAR	0.915	0.915	0.915	0.915	0.915	0.915	0.915	
EFF-P = 0.8253	V-BAR	155.495	170.501	186.036	183.621	183.999	170.597	158.461	
	VZ-BAR	150.255	165.770	183.605	179.189	179.445	167.135	155.397	
	V-THET-BAR	40.027	39.877	40.581	40.101	40.679	34.194	31.011	
IGV,ROTOR,STATOR	MACH-BAR	0.439	0.484	0.536	0.523	0.522	0.481	0.445	
	EFF-POLY	0.802	0.786	0.866	0.850	0.864	0.666	0.630	
PR = 1.4102	INCID-M	-7.4	-7.6	-5.9	-5.7	-5.3	-7.4	-9.2	
TR = 1.1272	DEVIATION	14.1	12.2	11.6	12.3	13.4	13.5	14.2	
EFF-A = 0.8137	OMEGA-BAR	0.134	0.133	0.070	0.074	0.060	0.162	0.165	
EFF-P = 0.8205	LOSS PAR	0.046	0.047	0.026	0.029	0.024	0.069	0.080	
	D-FACTOR	0.557	0.511	0.455	0.453	0.441	0.491	0.510	
	TURNING	33.4	31.5	32.5	32.2	33.5	34.7	34.3	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 15)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.530	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3582.8	P-STATIC	9.362	9.362	9.366	9.375	9.387	9.404	9.414	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.611	-4.225	-5.770	-7.290	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	113.690	113.639	113.324	112.693	111.737	110.460	109.686	
	VZ-BAR	113.690	113.639	113.324	112.693	111.737	110.460	109.686	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.338	0.338	0.337	0.335	0.332	0.328	0.326	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1418	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.095	10.096	10.103	10.120	10.119	10.118	10.116	10.112
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.059	9.061	9.068	9.078	9.090	9.104	9.112	
	BETABAR	8.392	10.053	11.593	12.175	11.930	9.656	5.512	
	EPSILON	-0.000	-0.910	-2.542	-4.167	-5.729	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	132.784	132.733	132.713	132.978	132.158	131.156	130.546	
	VZ-BAR	131.362	130.693	130.005	129.987	129.303	129.293	129.942	
	V-THET-BAR	19.378	23.169	26.671	28.045	27.318	21.999	12.540	
	MACH-BAR	0.396	0.396	0.396	0.397	0.394	0.391	0.389	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.3	-6.0	-9.6	-14.4	
	OMEGABAR	0.048	0.046	0.037	0.016	0.016	0.018	0.021	
	TURNING	-8.4	-10.1	-11.6	-12.2	-11.9	-9.7	-5.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.095	10.096	10.103	10.120	10.119	10.118	10.116	10.112
WCOR= 1.533	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3582.8	P-STATIC	8.369	8.376	8.382	8.388	8.394	8.396	8.393	
	BETABAR	6.398	7.741	9.027	9.562	9.407	7.612	4.357	
	EPSILON	-1.170	-1.840	-3.361	-4.856	-6.057	-6.557	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	173.756	173.461	173.441	173.853	173.506	173.359	173.429	
	VZ-BAR	172.673	171.879	171.293	171.437	171.173	171.827	172.928	
	V-THET-BAR	19.363	23.368	27.212	28.880	28.359	22.962	13.177	
	MACH-BAR	0.524	0.523	0.523	0.525	0.524	0.523	0.523	
	U-WHEEL	228.508	235.310	248.914	262.519	276.124	289.729	296.531	
	V-BAR-PR	271.215	272.880	280.168	289.791	301.186	317.318	331.955	
	BETABAR-PR	50.456	50.959	52.309	53.729	55.360	57.213	58.605	
	V-THET-B-P	-209.145	-211.945	-221.703	-233.639	-247.765	-266.767	-283.355	
	MACH-BAR-P	0.818	0.823	0.845	0.874	0.909	0.957	1.002	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.336	14.783	14.974	14.889	14.610	14.521	14.305	14.745
ROTOR	T-TOTAL	324.24	324.03	324.47	323.85	326.22	328.01	328.57	325.33
-----	P-STATIC	10.443	10.543	10.755	10.952	11.126	11.312	11.400	
PR = 1.4582	BETABAR	49.317	46.901	46.638	45.929	49.802	49.909	48.423	
TR = 1.1290	EPSILON	-2.885	-2.851	-3.344	-4.651	-5.795	-6.267	-6.418	
EFF-A = 0.8849	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8884	V-BAR	237.445	244.779	242.488	233.779	221.530	213.017	203.618	
	VZ-BAR	154.784	167.249	166.494	162.605	142.983	137.182	135.125	
	V-THET-BAR	180.061	178.726	176.296	167.964	169.206	162.964	152.321	
	MACH-BAR	0.688	0.712	0.704	0.677	0.636	0.608	0.579	
	U-WHEEL	225.823	232.448	245.698	258.948	272.198	285.447	292.072	
	V-BAR-PR	161.407	175.668	180.392	186.336	176.216	183.907	194.395	
	BETABAR-PR	16.470	17.804	22.627	29.229	35.766	41.760	45.964	
	V-THET-B-P	-45.762	-53.722	-69.401	-90.983	-102.997	-122.488	-139.752	
	MACH-BAR-P	0.468	0.511	0.524	0.540	0.506	0.525	0.553	
	D-FACTOR	0.611	0.560	0.557	0.548	0.611	0.614	0.601	
	TURNING	34.0	33.2	29.7	24.5	19.6	15.5	12.6	
	INCID-M	-6.9	-5.2	-3.0	-1.8	-1.5	-1.4	-1.2	
	DEVIATION	28.3	21.5	14.0	11.6	10.6	10.5	12.1	
	OMEGABAR-P	0.168	0.079	0.057	0.055	0.152	0.193	0.222	
	LOSS PAR	0.056	0.027	0.020	0.019	0.052	0.063	0.069	
	PT-RATIO	1.420	1.464	1.482	1.471	1.444	1.435	1.414	1.4582
	EFF-AD	0.842	0.925	0.944	0.942	0.838	0.787	0.742	0.8849
	EFF-POLY	0.850	0.929	0.947	0.945	0.846	0.797	0.755	0.8884
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.336	14.774	14.974	14.895	14.616	14.523	14.305	14.745
	T-TOTAL	324.24	324.03	324.48	323.84	326.15	328.00	328.57	325.33
	P-STATIC	10.466	10.521	10.673	10.838	10.998	11.170	11.258	
	BETABAR	49.644	46.865	46.155	45.200	48.734	48.778	47.236	
	EPSILON	-0.113	-1.030	-2.549	-3.872	-5.280	-6.990	-7.979	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	236.624	245.307	245.151	237.683	226.111	218.201	208.974	
	VZ-BAR	153.223	167.725	169.817	167.481	149.135	143.789	141.888	
	V-THET-BAR	180.316	179.000	176.808	168.651	169.950	164.122	153.420	
	MACH-BAR	0.686	0.714	0.712	0.689	0.650	0.624	0.595	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.809	14.280	14.720	14.614	14.371	14.157	13.768	14.417
ROTOR PLUS STATOR	T-TOTAL	324.24	324.03	324.48	323.83	326.06	328.00	328.57	325.33
----------	P-STATIC	12.186	12.194	12.193	12.169	12.133	12.088	12.059	
PR = 1.4258	BETABAR	15.128	14.222	12.799	12.796	13.104	12.835	12.115	
TR = 1.1290	EPSILON	0.450	-0.043	-1.122	-2.275	-3.430	-4.682	-5.489	
EFF-A = 0.8270	K-BAR	0.915	0.915	0.915	0.915	0.915	0.915	0.915	
EFF-P = 0.8354	V-BAR	151.176	169.388	184.803	182.080	175.850	170.540	156.641	
	VZ-BAR	145.937	164.199	180.211	177.559	171.271	166.279	153.153	
	V-THET-BAR	39.453	41.598	40.938	40.325	39.869	37.884	32.874	
IGV,ROTOR,STATOR	MACH-BAR	0.426	0.480	0.526	0.518	0.498	0.480	0.439	
----------	EFF-POLY	0.801	0.811	0.884	0.858	0.859	0.754	0.641	
PR = 1.4230	INCID-M	-6.0	-5.8	-4.7	-5.3	-2.8	-4.9	-7.5	
TR = 1.1290	DEVIATION	14.3	12.9	11.9	12.4	13.7	14.8	15.1	
EFF-A = 0.8247	OMEGA-BAR	0.136	0.116	0.059	0.069	0.068	0.109	0.176	
EFF-P = 0.8309	LOSS PAR	0.047	0.041	0.022	0.027	0.027	0.046	0.076	
	D-FACTOR	0.572	0.513	0.459	0.452	0.465	0.473	0.510	
	TURNING	34.5	32.6	33.4	32.4	35.6	35.9	35.1	

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Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 16)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.512	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3577.0	P-STATIC	9.382	9.382	9.386	9.394	9.406	9.422	9.432	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.611	-4.225	-5.770	-7.290	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	112.167	112.119	111.807	111.184	110.243	108.985	108.219	
	VZ-BAR	112.167	112.119	111.807	111.184	110.243	108.985	108.219	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.333	0.333	0.332	0.330	0.327	0.324	0.321	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.096	10.097	10.105	10.121	10.120	10.119	10.117	10.113
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.089	9.091	9.097	9.108	9.119	9.133	9.140	
	BETABAR	8.384	10.044	11.587	12.166	11.914	9.646	5.618	
	EPSILON	-0.000	-0.910	-2.542	-4.167	-5.729	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	130.845	130.817	130.820	131.078	130.289	129.298	128.713	
	VZ-BAR	129.447	128.810	128.154	128.134	127.482	127.465	128.095	
	V-THET-BAR	19.078	22.814	26.275	27.624	26.897	21.666	12.600	
	MACH-BAR	0.390	0.390	0.390	0.391	0.389	0.385	0.384	
	INCID-H	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.6	-4.3	-6.0	-9.6	-14.3	
	OMEGABAR	0.047	0.045	0.036	0.015	0.015	0.017	0.020	
	TURNING	-8.4	-10.0	-11.6	-12.2	-11.9	-9.6	-5.6	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.096	10.097	10.105	10.121	10.120	10.119	10.117	10.113
WCOR= 1.515	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3577.0	P-STATIC	8.424	8.430	8.436	8.441	8.447	8.449	8.446	
	BETABAR	6.406	7.751	9.041	9.575	9.415	7.621	4.451	
	EPSILON	-1.170	-1.805	-3.305	-4.874	-6.094	-6.592	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	170.860	170.582	170.590	171.027	170.682	170.521	170.592	
	VZ-BAR	169.794	169.022	168.470	168.644	168.383	169.011	170.078	
	V-THET-BAR	19.063	23.007	26.808	28.448	27.921	22.615	13.240	
	MACH-BAR	0.515	0.514	0.514	0.516	0.515	0.514	0.514	
	U-WHEEL	228.141	234.931	248.514	262.097	275.680	289.263	296.055	
	V-BAR-PR	269.338	271.073	278.454	288.156	299.564	315.702	330.016	
	BETABAR-PR	50.920	51.425	52.769	54.178	55.798	57.631	58.978	
	V-THET-B-P	-209.077	-211.925	-221.706	-233.649	-247.759	-266.648	-282.815	
	MACH-BAR-P	0.812	0.817	0.839	0.869	0.903	0.952	0.995	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.487	14.772	15.088	14.978	14.772	14.684	14.447	14.854
ROTOR	T-TOTAL	324.91	324.83	324.98	324.48	326.89	329.01	329.49	326.04
-----	P-STATIC	10.590	10.688	10.913	11.117	11.300	11.488	11.577	
PR = 1.4688	BETABAR	50.697	49.312	47.860	47.546	51.213	51.827	50.649	
TR = 1.1314	EPSILON	-2.885	-2.417	-3.198	-4.537	-5.739	-6.397	-6.418	
EFF-A = 0.8859	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.8894	V-BAR	236.447	240.060	240.243	230.688	219.971	211.583	201.481	
	VZ-BAR	149.769	156.506	161.188	155.715	137.794	130.765	127.754	
	V-THET-BAR	182.965	182.026	178.143	170.206	171.464	166.336	155.800	
	MACH-BAR	0.684	0.696	0.696	0.667	0.631	0.603	0.571	
	U-WHEEL	225.460	232.074	245.303	258.531	271.760	284.989	291.603	
	V-BAR-PR	155.681	164.318	174.631	179.028	170.431	176.573	186.450	
	BETABAR-PR	15.841	17.729	22.616	29.563	36.050	42.219	46.749	
	V-THET-B-P	-42.495	-50.048	-67.160	-88.326	-100.296	-118.652	-135.803	
	MACH-BAR-P	0.451	0.476	0.506	0.517	0.489	0.503	0.529	
	D-FACTOR	0.634	0.603	0.578	0.575	0.632	0.641	0.627	
	TURNING	35.1	33.7	30.2	24.6	19.7	15.4	12.2	
	INCID-H	-6.5	-4.7	-2.5	-1.4	-1.1	-1.0	-0.8	
	DEVIATION	27.7	21.5	14.0	11.9	10.9	11.0	12.9	
	OMEGABAR-P	0.161	0.106	0.053	0.058	0.145	0.194	0.224	
	LOSS PAR	0.054	0.036	0.018	0.020	0.049	0.063	0.069	
	PT-RATIO	1.435	1.463	1.493	1.480	1.460	1.451	1.428	1.4688
	EFF-AD	0.853	0.903	0.950	0.941	0.849	0.792	0.747	0.8859
	EFF-POLY	0.860	0.908	0.953	0.944	0.857	0.803	0.760	0.8894

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 16)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.487	14.765	15.085	14.985	14.776	14.685	14.447	14.854
	T-TOTAL	324.91	324.83	324.98	324.46	326.81	329.00	329.49	326.04
	P-STATIC	10.609	10.672	10.840	11.012	11.171	11.389	11.436	
	BETABAR	50.994	49.318	47.452	46.812	50.067	50.641	49.366	
	EPSILON	-0.113	-0.962	-2.535	-3.755	-5.206	-6.922	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	235.786	240.404	242.547	234.358	224.551	216.625	206.782	
	VZ-BAR	148.405	156.711	164.010	160.394	148.139	137.379	134.661	
	V-THET-BAR	183.224	182.301	178.688	170.872	172.179	167.492	156.924	
	MACH-BAR	0.682	0.697	0.704	0.678	0.645	0.618	0.588	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.951	14.328	14.771	14.706	14.529	14.317	13.930	14.522
	T-TOTAL	324.91	324.83	325.00	324.84	326.68	328.98	329.49	326.04
ROTOR PLUS STATOR	P-STATIC	12.334	12.342	12.382	12.321	12.289	12.246	12.218	
PR = 1.4360	BETABAR	15.516	14.536	13.193	13.099	13.414	13.472	13.187	
TR = 1.1314	EPSILON	0.450	-0.072	-1.133	-2.177	-3.343	-4.848	-5.489	
EFF-A = 0.8287	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8372	V-BAR	150.230	165.008	180.769	179.257	175.095	169.842	156.028	
	VZ-BAR	144.755	159.729	175.999	174.593	170.318	165.168	151.914	
	V-THET-BAR	40.187	41.399	41.255	40.626	40.620	39.567	35.595	
IGV,ROTOR,STATOR	MACH-BAR	0.423	0.467	0.513	0.509	0.495	0.478	0.437	
	EFF-POLY	0.799	0.828	0.858	0.856	0.859	0.749	0.643	
PR = 1.4334	INCID-H	-4.7	-3.3	-3.4	-3.7	-1.8	-3.0	-5.4	
TR = 1.1314	DEVIATION	14.7	13.2	12.3	12.7	14.0	15.5	16.1	
EFF-A = 0.8268	OMEGA-BAR	0.138	0.107	0.078	0.070	0.069	0.111	0.172	
EFF-P = 0.8330	LOSS PAR	0.047	0.038	0.027	0.027	0.028	0.047	0.074	
	D-FACTOR	0.578	0.526	0.472	0.460	0.467	0.476	0.509	
	TURNING	35.5	34.8	34.3	33.7	36.7	37.2	36.2	

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Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 17)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.498	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3585.5	P-STATIC	9.412	9.413	9.417	9.424	9.436	9.451	9.461	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.611	-4.225	-5.770	-7.290	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	109.787	109.740	109.636	108.827	107.907	106.678	105.931	
	VZ-BAR	109.787	109.740	109.636	108.827	107.907	106.678	105.931	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.326	0.326	0.325	0.323	0.320	0.317	0.314	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.096	10.097	10.105	10.121	10.120	10.119	10.117	10.113
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.133	9.135	9.141	9.151	9.162	9.175	9.182	
	BETABAR	8.369	10.129	11.580	12.748	11.899	9.631	5.608	
	EPSILON	-0.000	-0.904	-2.542	-4.167	-5.729	-7.291	-8.118	
	K-BAR	0.960	0.960	0.960	0.960	0.959	0.959	0.960	
	V-BAR	127.833	127.807	127.822	128.122	127.354	126.388	125.814	
	VZ-BAR	126.472	125.812	125.220	125.252	124.617	124.601	125.212	
	V-THET-BAR	18.605	22.477	25.658	26.962	26.259	21.144	12.295	
	MACH-BAR	0.381	0.381	0.381	0.382	0.379	0.377	0.375	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.6	-3.6	-4.4	-6.0	-9.6	-14.3	
	OMEGABAR	0.049	0.047	0.037	0.015	0.016	0.018	0.021	
	TURNING	-8.4	-10.1	-11.6	-12.1	-11.9	-9.6	-5.6	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.096	10.097	10.105	10.121	10.120	10.119	10.117	10.113
WCOR= 1.501	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3585.5	P-STATIC	8.504	8.511	8.517	8.521	8.527	8.529	8.526	
	BETABAR	6.413	7.869	9.065	9.593	9.433	7.635	4.459	
	EPSILON	-1.170	-1.766	-3.224	-4.767	-6.143	-6.743	-6.637	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	166.426	166.125	166.128	166.618	166.316	166.120	166.182	
	VZ-BAR	165.385	164.567	164.053	164.288	164.067	164.643	165.679	
	V-THET-BAR	18.590	22.684	26.174	27.767	27.259	22.070	12.920	
	MACH-BAR	0.501	0.500	0.500	0.502	0.501	0.500	0.500	
	U-WHEEL	228.682	235.488	249.104	262.719	276.334	289.949	296.757	
	V-BAR-PR	267.377	269.014	276.788	286.695	298.257	314.433	328.654	
	BETABAR-PR	51.790	52.284	53.650	55.036	56.626	58.423	59.727	
	V-THET-B-P	-210.092	-212.804	-222.929	-234.952	-249.075	-267.879	-283.837	
	MACH-BAR-P	0.805	0.810	0.833	0.863	0.898	0.947	0.989	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.589	14.846	15.170	15.155	15.017	14.710	14.518	14.979
ROTOR	T-TOTAL	325.34	324.93	325.36	324.84	326.78	328.85	330.07	326.17
	P-STATIC	10.799	10.905	11.131	11.348	11.537	11.718	11.805	
PR = 1.4811	BETABAR	52.487	50.739	49.407	48.548	51.182	53.883	53.646	
TR = 1.1319	EPSILON	-2.886	-2.605	-3.275	-4.645	-5.824	-6.446	-6.418	
EFF-A = 0.9028	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.9059	V-BAR	231.993	234.688	235.237	227.533	218.257	203.850	195.090	
	VZ-BAR	141.270	148.522	153.063	150.625	136.816	120.157	115.643	
	V-THET-BAR	184.021	181.709	178.627	170.538	170.050	164.673	157.120	
	MACH-BAR	0.670	0.679	0.680	0.656	0.625	0.579	0.552	
	U-WHEEL	225.995	232.624	245.884	259.144	272.404	285.664	292.294	
	V-BAR-PR	187.373	157.013	167.200	174.763	170.869	170.526	177.891	
	BETABAR-PR	16.548	18.916	23.717	30.465	36.802	45.196	49.453	
	V-THET-B-P	-41.974	-50.915	-67.257	-88.606	-102.354	-120.991	-135.174	
	MACH-BAR-P	0.425	0.454	0.483	0.504	0.490	0.485	0.503	
	D-FACTOR	0.664	0.628	0.604	0.589	0.628	0.657	0.658	
	TURNING	35.2	33.4	29.9	24.6	19.8	13.2	10.3	
	INCID-M	-5.6	-3.8	-1.6	-0.5	-0.3	-0.2	-0.1	
	DEVIATION	28.4	22.7	15.1	12.8	11.6	14.0	15.6	
	OMEGABAR-P	0.157	0.097	0.050	0.039	0.106	0.188	0.228	
	LOSS PAR	0.053	0.033	0.017	0.014	0.036	0.058	0.067	
	PT-RATIO	1.445	1.470	1.501	1.497	1.484	1.454	1.435	1.4811
	EFF-AD	0.860	0.913	0.954	0.961	0.891	0.799	0.748	0.9028
	EFF-POLY	0.867	0.917	0.956	0.963	0.897	0.809	0.760	0.9059
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.589	14.841	15.166	15.157	15.023	14.718	14.518	14.979
	T-TOTAL	325.34	324.93	325.36	324.83	326.72	328.83	330.07	326.17
	P-STATIC	10.822	10.886	11.058	11.243	11.420	11.597	11.683	
	BETABAR	52.848	50.719	48.967	47.825	50.188	52.720	52.393	
	EPSILON	-0.113	-0.977	-2.460	-3.852	-5.219	-6.910	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	231.207	235.171	237.505	231.075	222.385	208.429	199.763	
	VZ-BAR	139.633	148.892	155.919	155.145	142.386	126.247	121.905	
	V-THET-BAR	184.281	182.027	179.157	171.248	170.824	165.844	158.255	
	MACH-BAR	0.667	0.680	0.687	0.667	0.638	0.593	0.566	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	14.052	14.443	14.848	14.789	14.688	14.323	14.012	14.612
ROTOR PLUS STATOR	T-TOTAL	325.34	324.94	325.36	324.82	326.62	328.80	330.07	326.17
	P-STATIC	12.538	12.545	12.546	12.524	12.493	12.450	12.426	
PR = 1.4449	BETABAR	15.836	14.939	13.415	13.389	13.683	13.898	13.811	
TR = 1.1319	EPSILON	0.450	-0.090	-1.225	-2.285	-3.406	-4.793	-5.489	
EFF-A = 0.8407	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8488	V-BAR	184.756	180.409	175.277	173.980	172.202	161.005	149.571	
	VZ-BAR	139.262	158.990	170.495	169.252	167.315	156.292	145.247	
	V-THET-BAR	39.502	41.337	40.663	40.286	40.733	38.671	35.705	
IGV,ROTOR,STATOR	MACH-BAR	0.407	0.453	0.497	0.493	0.486	0.452	0.418	
	EFF-POLY	0.796	0.837	0.855	0.813	0.806	0.725	0.633	
PR = 1.4423	INCID-M	-2.8	-1.9	-1.9	-2.7	-1.3	-0.9	-2.4	
TR = 1.1319	DEVIATION	15.1	13.6	12.5	13.0	14.3	15.9	16.8	
EFF-A = 0.8386	OMEGA-BAR	0.142	0.101	0.077	0.098	0.093	0.126	0.179	
EFF-P = 0.8446	LOSS PAR	0.049	0.035	0.029	0.036	0.038	0.053	0.077	
	D-FACTOR	0.596	0.535	0.485	0.476	0.472	0.497	0.527	
	TURNING	37.0	35.8	35.6	34.4	36.5	38.8	38.6	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 18)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.478	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3581.2	P-STATIC	9.401	9.402	9.406	9.414	9.426	9.441	9.451	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.611	-4.223	-5.770	-7.288	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	110.657	110.607	110.296	109.676	108.738	107.489	106.730	
	VZ-BAR	110.657	110.607	110.296	109.676	108.738	107.489	106.730	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.329	0.328	0.327	0.326	0.323	0.319	0.317	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.098	10.100	10.107	10.122	10.122	10.121	10.120	10.115
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.141	9.143	9.150	9.159	9.171	9.183	9.189	
	BETABAR	8.366	10.129	11.679	12.151	11.891	9.630	5.716	
	EPSILON	-0.000	-0.900	-2.542	-4.161	-5.728	-7.288	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	127.448	127.425	127.418	127.667	126.898	125.937	125.418	
	VZ-BAR	126.088	125.437	124.780	124.807	124.171	124.158	124.794	
	V-THET-BAR	18.541	22.408	25.794	26.872	26.147	21.066	12.492	
	MACH-BAR	0.380	0.380	0.380	0.380	0.378	0.375	0.374	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.6	-3.5	-4.4	-6.0	-9.6	-14.2	
	OMEGABAR	0.046	0.043	0.033	0.013	0.013	0.015	0.018	
	TURNING	-8.4	-10.1	-11.7	-12.2	-11.9	-9.6	-5.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.098	10.100	10.108	10.122	10.122	10.121	10.120	10.115
WCOR= 1.481	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3581.2	P-STATIC	8.516	8.523	8.529	8.534	8.541	8.543	8.541	
	BETABAR	6.414	7.850	9.184	9.597	9.432	7.641	4.549	
	EPSILON	-1.170	-1.823	-3.280	-4.860	-6.242	-6.810	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	165.835	165.566	165.561	165.974	165.627	165.407	165.491	
	VZ-BAR	164.797	164.012	163.457	163.651	163.388	163.935	164.970	
	V-THET-BAR	18.527	22.612	26.311	27.669	27.141	21.993	13.126	
	MACH-BAR	0.499	0.498	0.498	0.500	0.499	0.498	0.498	
	U-WHEEL	228.408	235.206	248.805	262.404	276.003	289.602	296.401	
	V-BAR-PR	266.848	268.508	276.084	286.152	297.706	313.832	327.811	
	BETABAR-PR	51.861	52.350	53.696	55.116	56.713	58.507	59.785	
	V-THET-R-P	-209.881	-212.594	-222.494	-234.735	-248.862	-267.609	-283.275	
	MACH-BAR-P	0.803	0.808	0.831	0.861	0.896	0.945	0.987	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.700	14.950	15.271	15.224	14.984	14.740	14.528	15.020
ROTOR	T-TOTAL	325.77	325.64	325.89	325.26	327.00	329.26	330.82	326.62
-----	P-STATIC	10.807	10.914	11.155	11.374	11.566	11.751	11.840	
PR = 1.4849	BETABAR	52.465	51.268	50.257	48.923	52.154	54.664	55.493	
TR = 1.1334	EPSILON	-2.886	-2.468	-3.256	-4.712	-5.924	-6.507	-6.418	
EFF-A = 0.8985	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.9019	V-BAR	234.666	237.150	235.619	228.510	216.413	203.654	194.267	
	VZ-BAR	142.968	148.380	150.639	150.147	132.780	117.789	110.054	
	V-THET-BAR	186.086	184.994	181.174	172.258	170.889	166.734	160.087	
	MACH-BAR	0.678	0.686	0.681	0.659	0.619	0.578	0.549	
	U-WHEEL	225.724	232.346	245.590	258.834	272.078	285.322	291.944	
	V-BAR-PR	148.361	155.758	163.847	173.327	166.949	167.583	171.750	
	BETABAR-PR	15.496	17.695	23.148	29.967	37.311	45.336	50.150	
	V-THET-R-P	-39.638	-47.352	-64.416	-86.576	-101.189	-119.788	-131.857	
	MACH-BAR-P	0.428	0.450	0.473	0.500	0.478	0.476	0.485	
	D-FACTOR	0.662	0.636	0.618	0.596	0.642	0.669	0.675	
	TURNING	36.4	34.7	30.5	25.1	19.4	13.2	9.6	
	INCID-M	-5.5	-3.8	-1.6	-0.4	-0.2	-0.1	0.0	
	DEVIATION	27.4	21.4	14.5	12.3	12.1	14.1	16.3	
	OMEGABAR-P	0.150	0.100	0.059	0.040	0.117	0.193	0.243	
	LOSS PAR	0.051	0.034	0.020	0.014	0.039	0.060	0.070	
	PT-RATIO	1.456	1.480	1.505	1.504	1.480	1.456	1.436	1.4849
	EFF-AD	0.868	0.912	0.946	0.961	0.880	0.795	0.735	0.8985
	EFF-POLY	0.875	0.916	0.949	0.963	0.887	0.806	0.749	0.9019
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.700	14.984	15.207	15.227	14.989	14.748	14.528	15.020
	T-TOTAL	325.77	325.64	325.89	325.26	326.95	329.23	330.82	326.62
	P-STATIC	10.834	10.903	11.087	11.278	11.454	11.632	11.716	
	BETABAR	52.855	51.309	49.851	48.293	51.165	53.497	54.112	
	EPSILON	-0.113	-1.012	-2.638	-3.904	-5.221	-6.876	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	233.781	237.383	237.751	231.734	220.424	208.114	199.024	
	VZ-BAR	141.164	148.393	153.293	154.177	138.223	123.801	116.667	
	V-THET-BAR	186.349	185.280	181.730	173.003	171.701	167.286	161.243	
	MACH-BAR	0.675	0.686	0.687	0.669	0.632	0.592	0.563	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	14.163	14.527	14.878	14.842	14.639	14.354	14.062	14.641
ROTOR PLUS STATOR	T-TOTAL	325.77	325.64	325.90	325.26	326.83	329.18	330.82	326.62
----------	P-STATIC	12.503	12.587	12.582	12.561	12.531	12.494	12.472	
PR = 1.4474	BETABAR	16.176	15.265	13.729	13.692	13.922	14.340	14.373	
TR = 1.1334	EPSILON	0.450	-0.031	-1.199	-2.261	-3.321	-4.716	-5.489	
EFF-A = 0.8351	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8435	V-BAR	187.463	181.980	174.977	174.408	168.916	160.371	149.632	
	VZ-BAR	141.625	156.268	169.978	169.451	163.954	155.375	144.949	
	V-THET-BAR	41.081	42.632	41.526	41.283	40.641	39.719	37.144	
IGV,ROTOR,STATOR	MACH-BAR	0.415	0.457	0.495	0.494	0.477	0.450	0.417	
----------	EFF-POLY	0.800	0.834	0.851	0.807	0.799	0.731	0.656	
PR = 1.4851	INCID-M	-2.8	-1.3	-1.0	-2.2	-0.3	-0.1	-0.7	
TR = 1.1334	DEVIATION	15.4	14.0	12.8	13.3	14.6	16.3	17.3	
EFF-A = 0.8335	OMEGA-BAR	0.139	0.103	0.080	0.097	0.099	0.125	0.166	
EFF-P = 0.8399	LOSS PAR	0.047	0.036	0.030	0.038	0.040	0.052	0.071	
	D-FACTOR	0.589	0.536	0.490	0.477	0.485	0.500	0.529	
	TURNING	36.7	36.0	36.1	34.6	37.2	39.2	39.7	

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Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 19)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.443	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3592.8	P-STATIC	9.454	9.454	9.458	9.465	9.476	9.490	9.499	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.928	-2.628	-4.228	-5.782	-7.290	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	106.498	106.456	106.165	105.584	104.709	103.518	102.799	
	VZ-BAR	106.498	106.456	106.165	105.584	104.709	103.518	102.799	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.316	0.316	0.315	0.313	0.311	0.307	0.305	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.100	10.102	10.110	10.124	10.124	10.123	10.121	10.117
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.194	9.196	9.202	9.211	9.222	9.234	9.240	
	BETABAR	8.369	10.135	11.683	12.150	11.985	9.634	5.713	
	EPSILON	-0.000	-0.879	-2.563	-4.135	-5.730	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	123.845	123.859	123.894	124.147	123.417	122.469	121.937	
	VZ-BAR	122.526	121.924	121.327	121.367	120.726	120.737	121.331	
	V-THET-BAR	18.026	21.796	25.088	26.129	25.628	20.495	12.138	
	MACH-BAR	0.369	0.369	0.369	0.370	0.367	0.365	0.363	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.6	-3.5	-4.4	-5.9	-9.6	-14.2	
	OMEGABAR	0.046	0.043	0.032	0.012	0.011	0.014	0.016	
	TURNING	-8.4	-10.1	-11.7	-12.1	-12.0	-9.6	-5.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.100	10.102	10.110	10.124	10.124	10.123	10.121	10.117
WCOR= 1.445	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3592.8	P-STATIC	8.610	8.616	8.622	8.627	8.634	8.637	8.635	
	BETABAR	6.437	7.876	9.176	9.631	9.544	7.676	4.565	
	EPSILON	-1.170	-1.843	-3.395	-5.014	-6.336	-6.896	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	160.664	160.433	160.448	160.813	160.440	160.179	160.263	
	VZ-BAR	159.651	158.917	158.391	158.546	158.219	158.741	159.754	
	V-THET-BAR	18.011	21.983	25.587	26.905	26.601	21.394	12.754	
	MACH-BAR	0.483	0.482	0.482	0.483	0.482	0.481	0.482	
	U-WHEEL	229.149	235.970	249.613	263.256	276.899	290.542	297.364	
	V-BAR-PR	264.703	266.544	274.365	284.604	296.114	312.475	326.380	
	BETABAR-PR	52.905	53.400	54.738	56.145	57.701	59.467	60.698	
	V-THET-R-P	-211.138	-213.987	-224.026	-236.351	-250.298	-269.148	-284.609	
	MACH-BAR-P	0.796	0.801	0.825	0.855	0.890	0.939	0.981	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.873	15.072	15.308	15.301	15.108	14.921	14.508	15.139
ROTOR	T-TOTAL	326.43	326.24	326.23	325.73	327.63	329.85	331.82	327.14
-----	P-STATIC	10.994	11.107	11.350	11.571	11.768	11.954	12.040	
PR = 1.4964	BETABAR	53.813	52.823	51.512	50.514	53.967	55.885	61.030	
TR = 1.1352	EPSILON	-2.886	-2.640	-3.268	-4.692	-5.962	-6.467	-6.418	
EFF-A = 0.9048	K-BAR	0.995	0.995	0.995	0.995	0.994	0.995	0.995	
EFF-P = 0.9079	V-BAR	232.886	233.968	231.733	224.060	212.938	201.684	185.956	
	VZ-BAR	137.501	141.381	144.218	142.478	125.262	113.128	90.068	
	V-THET-BAR	187.961	186.419	181.386	172.925	172.197	166.956	162.688	
	MACH-BAR	0.671	0.675	0.668	0.644	0.608	0.572	0.523	
	U-WHEEL	226.457	233.100	246.387	259.674	272.961	286.248	292.892	
	V-BAR-PR	142.788	148.895	158.201	166.811	160.768	164.442	158.320	
	BETABAR-PR	15.641	18.268	24.257	31.335	38.813	46.523	55.327	
	V-THET-R-P	-38.496	-46.681	-65.001	-86.749	-100.764	-119.292	-130.204	
	MACH-BAR-P	0.412	0.430	0.456	0.480	0.459	0.466	0.445	
	D-FACTOR	0.684	0.662	0.638	0.619	0.664	0.680	0.719	
	TURNING	37.3	35.1	30.5	24.8	18.9	12.9	5.4	
	INCID-R	-4.5	-2.7	-0.5	0.6	0.8	0.8	0.9	
	DEVIATION	27.5	22.0	15.7	13.7	13.6	15.3	21.5	
	OMEGABAR-P	0.140	0.097	0.053	0.041	0.115	0.183	0.268	
	LOSS PAR	0.047	0.033	0.018	0.014	0.038	0.055	0.068	
	PT-RATIO	1.473	1.492	1.514	1.511	1.492	1.474	1.433	1.4964
	EFF-AD	0.880	0.917	0.953	0.961	0.885	0.811	0.715	0.9048
	EFF-POLY	0.887	0.921	0.955	0.963	0.891	0.821	0.729	0.9079
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.873	15.068	15.305	15.304	15.108	14.931	14.508	15.139
	T-TOTAL	326.43	326.24	326.24	325.73	327.59	329.80	331.82	327.14
	P-STATIC	11.012	11.091	11.288	11.489	11.665	11.843	11.928	
	BETABAR	54.121	52.809	51.137	49.942	53.055	54.688	59.369	
	EPSILON	-0.113	-1.000	-2.820	-4.104	-5.537	-6.825	-7.979	
	K-BAR	0.995	0.995	0.995	0.995	0.995	0.995	0.995	
	V-BAR	232.306	234.413	233.678	226.879	216.533	206.010	190.435	
	VZ-BAR	136.150	141.695	146.623	146.010	130.147	119.086	97.029	
	V-THET-BAR	188.227	186.737	181.952	173.652	173.055	168.096	163.863	
	MACH-BAR	0.669	0.676	0.674	0.653	0.619	0.585	0.536	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	14.346	14.647	14.952	14.877	14.733	14.361	14.106	14.707
ROTOR PLUS STATOR	T-TOTAL	326.43	326.24	326.25	325.72	327.47	329.72	331.82	327.14
----------	P-STATIC	12.782	12.789	12.788	12.768	12.739	12.701	12.680	
PR = 1.4537	BETABAR	16.599	15.831	14.123	13.977	14.187	14.652	14.994	
TR = 1.1352	EPSILON	0.450	-0.071	-1.150	-2.209	-3.325	-4.746	-5.489	
EFF-A = 0.8341	K-BAR	0.915	0.915	0.915	0.915	0.915	0.915	0.915	
EFF-P = 0.8427	V-BAR	145.841	157.797	169.187	167.236	163.629	151.161	141.370	
	VZ-BAR	139.764	151.814	164.073	162.285	158.639	146.246	136.556	
	V-THET-BAR	41.661	43.038	41.282	40.392	40.103	38.234	36.575	
IGV,ROTOR,STATOR	MACH-BAR	0.409	0.444	0.478	0.472	0.461	0.423	0.393	
----------	EFF-POLY	0.804	0.833	0.841	0.788	0.786	0.646	0.684	
PR = 1.4516	INCID-R	-1.5	0.2	0.3	-0.6	1.5	1.1	4.6	
TR = 1.1352	DEVIATION	15.8	14.5	13.2	13.6	14.8	16.6	17.9	
EFF-A = 0.8332	OMEGA-BAR	0.136	0.106	0.088	0.112	0.109	0.185	0.156	
EFF-P = 0.8395	LOSS PAR	0.046	0.037	0.032	0.043	0.044	0.077	0.067	
	D-FACTOR	0.596	0.550	0.507	0.500	0.503	0.545	0.558	
	TURNING	37.5	37.0	37.0	36.0	38.9	40.0	44.4	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 20)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.414	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3578.4	P-STATIC	9.483	9.483	9.487	9.494	9.504	9.518	9.526	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.615	-4.207	-5.770	-7.284	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	104.118	104.076	103.788	103.214	102.347	101.192	100.487	
	VZ-BAR	104.118	104.076	103.788	103.214	102.347	101.192	100.487	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.309	0.309	0.308	0.306	0.303	0.300	0.298	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.102	10.104	10.111	10.125	10.125	10.124	10.123	10.118
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.215	9.217	9.223	9.233	9.243	9.255	9.262	
	BETABAR	8.371	10.130	11.681	12.143	11.973	9.720	5.807	
	EPSILON	-0.000	-0.879	-2.547	-4.163	-5.714	-7.268	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	122.855	122.470	122.498	122.698	121.977	121.032	120.505	
	VZ-BAR	121.150	120.559	119.957	119.953	119.323	119.291	119.886	
	V-THET-BAR	17.826	21.539	24.801	25.810	25.304	20.433	12.192	
	MACH-BAR	0.365	0.365	0.365	0.365	0.363	0.360	0.359	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.6	-3.5	-4.4	-5.9	-9.5	-14.1	
	OMEGABAR	0.046	0.042	0.031	0.011	0.010	0.012	0.014	
	TURNING	-8.4	-10.1	-11.7	-12.1	-12.0	-9.7	-5.8	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.102	10.104	10.112	10.125	10.125	10.124	10.123	10.118
WCOR= 1.416	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3578.4	P-STATIC	8.646	8.651	8.657	8.663	8.672	8.677	8.675	
	BETABAR	6.446	7.879	9.182	9.636	9.549	7.762	4.650	
	EPSILON	-1.170	-1.938	-3.596	-5.381	-6.979	-7.442	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	158.652	158.468	158.499	158.803	158.341	157.941	158.041	
	VZ-BAR	157.649	156.970	156.468	156.562	156.147	156.490	157.521	
	V-THET-BAR	17.812	21.724	25.290	26.581	26.267	21.331	12.811	
	MACH-BAR	0.477	0.476	0.476	0.477	0.476	0.474	0.475	
	U-WHEEL	228.227	235.021	248.609	262.197	275.785	289.373	296.167	
	V-BAR-PR	262.921	264.832	272.679	282.891	294.350	310.383	324.197	
	BETABAR-PR	53.158	53.650	54.982	56.396	57.961	59.721	60.930	
	V-THET-B-P	-210.415	-213.297	-223.318	-235.616	-249.518	-268.043	-283.356	
	MACH-BAR-P	0.790	0.795	0.819	0.850	0.884	0.932	0.974	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.994	15.160	15.354	15.354	15.097	14.662	14.467	15.139
ROTOR	T-TOTAL	326.81	326.59	326.45	325.94	327.52	330.09	332.54	327.25
	P-STATIC	10.986	11.103	11.355	11.580	11.774	11.951	12.037	
PR = 1.4962	BETABAR	53.574	52.899	51.738	50.644	54.108	59.850	63.742	
TR = 1.1356	EPSILON	-2.885	-2.352	-3.406	-4.953	-6.451	-6.817	-6.418	
EFF-A = 0.9022	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9052	V-BAR	236.292	236.361	232.760	225.174	212.383	193.947	184.928	
	VZ-BAR	140.305	142.576	144.138	142.794	128.522	97.437	81.814	
	V-THET-BAR	190.127	188.516	182.760	174.105	172.038	167.664	165.846	
	MACH-BAR	0.682	0.682	0.671	0.648	0.607	0.548	0.519	
	U-WHEEL	225.546	232.162	245.396	258.629	271.863	285.097	291.714	
	V-BAR-PR	144.707	149.112	157.164	165.948	159.633	152.666	150.121	
	BETABAR-PR	14.168	17.019	23.486	30.624	38.728	50.325	56.976	
	V-THET-B-P	-35.419	-43.646	-62.636	-84.525	-99.829	-117.433	-125.868	
	MACH-BAR-P	0.417	0.430	0.453	0.477	0.456	0.432	0.422	
	D-FACTOR	0.677	0.662	0.642	0.622	0.667	0.718	0.747	
	TURNING	39.0	36.6	31.5	25.8	19.2	9.4	4.0	
	INCID-M	-4.2	-2.5	-0.3	0.8	1.1	1.1	1.1	
	DEVIATION	26.0	20.8	14.9	13.0	13.5	19.1	23.1	
	OMEGABAR-P	0.131	0.092	0.052	0.038	0.114	0.224	0.291	
	LOSS PAR	0.044	0.032	0.018	0.013	0.038	0.063	0.071	
	PT-RATIO	1.484	1.500	1.518	1.516	1.491	1.448	1.429	1.4962
	EFF-AD	0.891	0.922	0.954	0.964	0.885	0.768	0.697	0.9022
	EFF-POLY	0.897	0.926	0.956	0.966	0.892	0.779	0.712	0.9052
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.994	15.156	15.351	15.360	15.108	14.668	14.467	15.139
	T-TOTAL	326.81	326.60	326.46	325.91	327.47	330.03	332.54	327.25
	P-STATIC	11.008	11.095	11.304	11.510	11.681	11.844	11.929	
	BETABAR	53.925	52.972	51.472	50.141	53.183	58.369	61.952	
	EPSILON	-0.113	-1.292	-2.801	-3.946	-5.119	-6.876	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	235.566	236.519	234.340	227.624	215.911	198.235	189.272	
	VZ-BAR	138.712	142.432	145.967	145.886	129.395	103.981	88.998	
	V-THET-BAR	190.395	188.823	183.326	174.728	172.831	168.752	167.043	
	MACH-BAR	0.679	0.683	0.676	0.655	0.617	0.561	0.532	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	14.467	14.727	14.969	14.892	14.748	14.364	14.113	14.734
ROTOR PLUS STATOR	T-TOTAL	326.81	326.60	326.48	325.91	327.24	329.73	332.54	327.25
	P-STATIC	12.777	12.783	12.781	12.761	12.732	12.697	12.678	
PR = 1.4561	BETABAR	16.896	16.042	14.325	13.995	14.290	14.764	15.225	
TR = 1.1356	EPSILON	0.450	0.042	-1.015	-1.879	-2.790	-4.384	-5.489	
EFF-A = 0.8357	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.8442	V-BAR	151.326	161.244	170.148	168.133	164.420	151.475	141.980	
	VZ-BAR	144.794	154.966	164.857	163.142	159.332	146.474	136.997	
	V-THET-BAR	43.979	44.550	42.097	40.661	40.584	38.601	37.285	
IGV,ROTOR,STATOR	MACH-BAR	0.425	0.454	0.480	0.475	0.463	0.424	0.394	
	EFF-POLY	0.805	0.830	0.828	0.768	0.798	0.796	0.709	
PR = 1.4542	INCID-M	-1.7	0.3	0.6	-0.4	1.7	4.7	7.2	
TR = 1.1356	DEVIATION	16.1	14.7	13.4	13.6	14.9	16.7	18.2	
EFF-A = 0.8351	OMEGA-BAR	0.132	0.106	0.094	0.121	0.105	0.108	0.140	
EFF-P = 0.8413	LOSS PAR	0.045	0.037	0.035	0.047	0.042	0.045	0.059	
	D-FACTOR	0.578	0.540	0.505	0.500	0.499	0.528	0.558	
	TURNING	37.0	36.9	37.1	36.1	38.9	43.6	46.7	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 21)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	I-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.362	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3582.6	P-STATIC	9.519	9.520	9.523	9.530	9.539	9.552	9.560	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.615	-4.233	-5.768	-7.284	-8.067	
	M-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	101.070	101.032	100.749	100.198	99.367	98.252	97.571	
	VZ-BAR	101.070	101.032	100.749	100.198	99.367	98.252	97.571	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.300	0.299	0.299	0.297	0.294	0.291	0.289	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1418	0.1507	0.1600	0.1693	0.1739	
	I-TOTAL	10.105	10.107	10.114	10.126	10.127	10.126	10.125	10.120
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.288	9.290	9.296	9.305	9.315	9.326	9.332	
	BETABAR	8.251	10.122	11.767	12.127	11.934	9.679	5.890	
	EPSILON	-0.000	-0.879	-2.547	-4.148	-5.702	-7.260	-8.118	
	M-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	117.352	117.369	117.411	117.564	116.863	115.944	115.432	
	VZ-BAR	116.138	115.540	114.943	114.940	114.337	114.290	114.823	
	V-THET-BAR	16.841	20.626	23.944	24.698	24.166	19.493	11.845	
	MACH-BAR	0.349	0.349	0.349	0.350	0.347	0.345	0.343	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.8	-3.6	-3.4	-4.4	-5.9	-9.6	-14.0	
	OMEGABAR	0.044	0.041	0.029	0.009	0.008	0.010	0.012	
	TURNING	-8.3	-10.1	-11.8	-12.1	-11.9	-9.7	-5.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	I-TOTAL	10.105	10.107	10.114	10.126	10.127	10.126	10.125	10.120
WCOR= 1.364	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3582.0	P-STATIC	8.771	8.775	8.782	8.789	8.799	8.806	8.803	
	BETABAR	6.378	7.903	9.289	9.660	9.565	7.773	4.746	
	EPSILON	-1.176	-2.079	-3.949	-5.922	-7.739	-8.284	-6.637	
	M-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	151.494	151.319	151.323	151.541	150.959	150.456	150.613	
	VZ-BAR	150.557	149.880	149.339	149.392	148.860	149.070	150.098	
	V-THET-BAR	16.828	20.806	24.425	25.430	25.085	20.349	12.486	
	MACH-BAR	0.454	0.454	0.454	0.454	0.452	0.451	0.451	
	U-WHEEL	226.461	235.261	248.864	262.466	276.068	289.670	296.471	
	V-BAR-R	259.723	261.639	269.584	280.187	291.809	307.826	321.247	
	BETABAR-R	54.572	55.051	56.360	57.778	59.327	61.034	62.145	
	V-THET-R-P	-211.633	-214.455	-224.439	-237.036	-250.983	-269.321	-284.025	
	MACH-BAR-P	0.779	0.784	0.808	0.840	0.875	0.923	0.963	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	I-TOTAL	15.177	15.275	15.423	15.411	15.160	14.682	14.356	15.221
ROTOR	T-TOTAL	327.33	327.17	327.09	326.80	328.93	331.84	333.69	328.14
-----	P-STATIC	11.035	11.153	11.392	11.615	11.806	11.986	12.075	
PR = 1.5040	BETABAR	53.093	53.120	52.212	51.325	55.450	62.584	70.283	
TR = 1.1367	EPSILON	-2.885	-2.724	-3.672	-5.322	-6.895	-7.038	-6.418	
EFF-A = 0.8948	M-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
EFF-P = 0.8977	V-BAR	239.218	237.680	233.424	225.731	213.437	193.715	179.817	
	VZ-BAR	143.656	142.641	143.026	141.063	121.046	89.248	60.665	
	V-THET-BAR	191.280	190.119	184.472	176.226	175.793	171.858	169.275	
	MACH-BAR	0.690	0.686	0.672	0.649	0.608	0.546	0.503	
	U-WHEEL	225.777	232.400	245.647	258.895	272.142	285.389	292.012	
	V-BAR-R	347.740	348.776	355.568	363.515	354.710	348.556	336.912	
	BETABAR-R	13.503	16.510	23.154	30.372	38.519	51.858	63.698	
	V-THET-R-P	-34.497	-42.281	-61.175	-82.669	-96.348	-113.530	-122.738	
	MACH-BAR-P	0.426	0.429	0.448	0.470	0.441	0.407	0.383	
	D-FACTOR	0.665	0.662	0.648	0.633	0.689	0.752	0.791	
	TURNING	41.1	38.5	33.2	27.4	20.8	9.2	-1.6	
	INCID-P	-2.6	-1.1	1.1	2.2	2.4	2.4	2.4	
	DEVIATION	25.4	20.3	14.6	12.7	13.3	20.6	29.8	
	OMEGABAR-P	0.116	0.091	0.060	0.052	0.140	0.260	0.333	
	LOSS PAR	0.039	0.031	0.021	0.018	0.046	0.071	0.066	
	PR-RATIO	1.502	1.511	1.525	1.522	1.497	1.450	1.418	1.5040
	EFF-AD	0.907	0.925	0.948	0.951	0.864	0.739	0.664	0.8948
	EFF-POLY	0.912	0.930	0.951	0.954	0.871	0.752	0.680	0.8977
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	I-TOTAL	15.177	15.273	15.421	15.416	15.173	14.697	14.356	15.221
	T-TOTAL	327.33	327.17	327.11	326.77	328.83	331.75	333.69	328.14
	P-STATIC	11.051	11.135	11.349	11.555	11.726	11.897	11.986	
	BETABAR	53.360	53.072	52.041	50.928	54.579	61.161	68.272	
	EPSILON	-0.113	-0.924	-2.577	-4.239	-5.152	-6.909	-7.979	
	M-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	238.723	238.205	234.772	227.808	216.534	197.557	183.536	
	VZ-BAR	142.468	143.115	144.407	143.601	125.503	95.340	67.944	
	V-THET-BAR	191.550	190.419	185.106	176.848	176.445	172.959	170.497	
	MACH-BAR	0.689	0.687	0.676	0.655	0.618	0.558	0.514	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	14.670	14.836	14.999	14.916	14.770	14.366	14.092	14.774
ROTOR PLUS STATOR	T-TOTAL	327.33	327.18	327.12	326.68	328.32	331.25	333.69	328.14
----------	P-STATIC	12.933	12.939	12.938	12.920	12.893	12.861	12.845	
PR = 1.4598	BETABAR	16.944	16.022	14.109	13.586	13.955	14.132	14.928	
TR = 1.1387	EPSILON	0.450	0.082	-0.789	-1.476	-2.284	-3.815	-5.489	
EFF-A = 0.8229	M-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
EFF-P = 0.8321	V-BAR	152.491	158.719	164.856	162.481	158.494	143.930	132.376	
	VZ-BAR	145.872	152.554	159.883	157.935	153.817	139.574	127.909	
	V-THET-BAR	48.441	43.801	40.185	38.167	38.221	35.139	34.101	
IGV,ROTOR,STATOR	MACH-BAR	0.428	0.446	0.464	0.458	0.445	0.401	0.366	
----------	EFF-POLY	0.821	0.836	0.824	0.776	0.814	0.816	0.788	
PR = 1.4582	INCID-S	-2.3	0.4	1.2	0.4	3.1	7.5	13.5	
TR = 1.1387	DEVIATION	16.2	14.7	13.2	13.2	14.6	16.1	17.9	
EFF-A = 0.8233	OMEGA-BAR	0.123	0.106	0.104	0.129	0.117	0.118	0.111	
EFF-P = 0.8297	LOSS PAR.	0.042	0.037	0.038	0.050	0.047	0.049	0.047	
	D-FACTOR	0.580	0.557	0.535	0.533	0.539	0.565	0.613	
	TURNING	36.4	37.1	37.9	37.3	40.6	47.0	53.3	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 22)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.442	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3052.3	P-STATIC	9.483	9.484	9.487	9.494	9.505	9.519	9.527	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.607	-4.225	-5.784	-7.316	-8.067	
	K-BAR	1.010	1.010	1.010	1.010	1.010	1.010	1.010	
	V-BAR	104.085	104.040	103.746	103.160	102.280	101.108	100.405	
	VZ-BAR	104.085	104.040	103.746	103.160	102.280	101.108	100.405	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.309	0.309	0.308	0.306	0.303	0.300	0.298	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.100	10.102	10.110	10.124	10.124	10.123	10.122	10.117
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.175	9.176	9.183	9.192	9.203	9.215	9.221	
	BETABAR	8.347	10.104	11.652	12.135	11.994	9.639	5.724	
	EPSILON	-0.000	-0.904	-2.566	-4.186	-5.757	-7.321	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	125.221	125.240	125.268	125.499	124.781	123.839	123.319	
	VZ-BAR	123.895	123.295	122.686	122.695	122.057	122.086	122.705	
	V-THET-BAR	18.178	21.970	25.301	26.382	25.930	20.734	12.498	
	MACH-BAR	0.373	0.373	0.373	0.374	0.372	0.369	0.367	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.4	-5.9	-9.6	-14.2	
	OMEGABAR	0.048	0.045	0.034	0.012	0.012	0.014	0.016	
	TURNING	-8.3	-10.1	-11.7	-12.1	-12.0	-9.6	-5.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.100	10.102	10.110	10.124	10.124	10.123	10.122	10.117
WCOR= 1.444	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3052.3	P-STATIC	8.576	8.583	8.590	8.594	8.597	8.598	8.595	
	BETABAR	6.415	7.852	9.157	9.617	9.531	7.657	4.561	
	EPSILON	-1.170	-1.788	-3.088	-4.336	-5.584	-6.565	-6.037	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	162.578	162.311	162.249	162.689	162.549	162.442	162.529	
	VZ-BAR	161.561	160.787	160.182	160.403	160.305	160.990	162.014	
	V-THET-BAR	18.164	22.174	25.819	27.180	26.916	21.643	12.923	
	MACH-BAR	0.489	0.488	0.488	0.489	0.489	0.488	0.489	
	U-WHEEL	194.672	200.467	212.057	223.648	235.238	246.828	252.623	
	V-BAR-PR	239.284	240.085	245.649	253.632	262.862	270.816	289.318	
	BETABAR-PR	47.532	47.955	49.301	50.770	52.421	54.437	55.945	
	V-THET-B-P	-176.508	-178.292	-186.238	-196.467	-208.322	-225.185	-239.700	
	MACH-BAR-P	0.720	0.722	0.739	0.763	0.790	0.832	0.870	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.069	13.239	13.395	13.378	13.341	12.956	12.573	13.251
ROTOR	T-TOTAL	313.53	313.15	314.03	313.19	312.69	314.38	315.54	313.51
	P-STATIC	9.726	9.779	9.911	10.058	10.190	10.310	10.369	
PR = 1.3098	BETABAR	41.865	40.782	41.232	39.634	38.227	40.478	42.119	
TR = 1.0880	EPSILON	-2.886	-2.799	-3.367	-4.310	-5.408	-6.296	-6.418	
EFF-A = 0.9132	K-BAR	0.865	0.865	0.865	0.865	0.865	0.865	0.865	
EFF-P = 0.9146	V-BAR	225.785	228.387	228.075	221.906	215.740	199.769	184.296	
	VZ-BAR	168.094	172.935	171.524	170.893	169.477	151.955	136.704	
	V-THET-BAR	150.743	149.177	150.326	141.552	133.496	129.681	123.603	
	MACH-BAR	0.663	0.672	0.670	0.651	0.632	0.581	0.532	
	U-WHEEL	192.185	198.029	209.316	220.605	231.893	243.181	248.824	
	V-BAR-PR	173.175	179.705	181.394	188.306	195.979	189.665	185.385	
	BETABAR-PR	13.914	15.772	18.978	24.820	30.139	36.757	42.490	
	V-THET-B-P	-41.642	-48.851	-58.991	-79.053	-98.397	-113.499	-125.221	
	MACH-BAR-P	0.509	0.529	0.533	0.553	0.574	0.551	0.535	
	D-FACTOR	0.469	0.440	0.453	0.437	0.424	0.487	0.529	
	TURNING	33.6	32.2	30.3	25.9	22.3	17.7	13.5	
	INCID-M	-9.9	-8.2	-6.0	-4.8	-4.5	-4.2	-3.8	
	DEVIATION	25.8	19.5	10.4	7.2	4.9	5.5	8.6	
	OMEGABAR-P	0.125	0.069	0.063	0.039	0.028	0.151	0.243	
	LOSS PAR	0.043	0.024	0.022	0.014	0.010	0.053	0.080	
	PT-RATIO	1.294	1.310	1.325	1.321	1.318	1.280	1.242	1.3098
	EFF-AD	0.869	0.927	0.933	0.955	0.965	0.803	0.673	0.9132
	EFF-POLY	0.873	0.929	0.935	0.956	0.966	0.810	0.683	0.9146
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.069	13.236	13.394	13.378	13.345	12.962	12.573	13.251
	T-TOTAL	313.53	313.15	314.02	313.21	312.68	314.36	315.54	313.51
	P-STATIC	9.744	9.752	9.819	9.925	10.037	10.141	10.189	
	BETABAR	42.111	40.664	40.646	38.854	37.283	39.149	40.369	
	EPSILON	-0.113	-0.823	-2.414	-3.931	-5.406	-7.024	-7.979	
	K-BAR	0.865	0.865	0.865	0.865	0.865	0.865	0.865	
	V-BAR	225.114	229.304	231.425	226.798	221.584	206.811	192.211	
	VZ-BAR	166.999	173.939	175.593	176.615	176.304	160.383	146.445	
	V-THET-BAR	150.956	149.416	150.747	142.279	134.226	130.566	124.495	
	MACH-BAR	0.661	0.675	0.681	0.667	0.651	0.603	0.556	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.360	12.763	13.066	13.070	13.155	12.563	11.732	12.906
ROTOR PLUS STATOR	T-TOTAL	313.53	313.15	314.02	313.21	312.68	314.39	315.54	313.51
	P-STATIC	10.790	10.795	10.790	10.766	10.732	10.678	10.644	
PR = 1.2757	BETABAR	12.366	12.127	11.722	12.071	12.199	11.028	8.628	
TR = 1.0880	EPSILON	0.450	-0.118	-1.399	-2.603	-3.776	-4.950	-5.489	
EFF-A = 0.8191	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8252	V-BAR	154.889	171.383	183.245	184.181	188.428	169.315	131.869	
	VZ-BAR	151.496	167.559	179.423	180.108	184.173	166.188	130.337	
	V-THET-BAR	33.170	36.001	37.229	38.518	39.817	32.387	19.777	
IGV,ROTOR,STATOR	MACH-BAR	0.445	0.495	0.530	0.534	0.547	0.487	0.375	
	EFF-POLY	0.645	0.734	0.790	0.776	0.822	0.619	0.386	
PR = 1.2739	INCID-M	-13.5	-12.0	-10.2	-11.7	-14.2	-14.5	-14.4	
TR = 1.0880	DEVIATION	11.6	10.8	10.8	11.7	12.8	13.0	11.6	
EFF-A = 0.8162	OMEGA-BAR	0.213	0.136	0.092	0.089	0.057	0.142	0.353	
EFF-P = 0.8204	LOSS PAR	0.074	0.048	0.034	0.035	0.023	0.060	0.154	
	D-FACTOR	0.497	0.432	0.396	0.372	0.329	0.390	0.559	
	TURNING	29.7	28.5	28.9	26.8	25.1	28.1	31.7	

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Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 23)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.406	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3046.2	P-STATIC	9.530	9.530	9.534	9.540	9.550	9.563	9.571	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.605	-4.199	-5.778	-7.316	-8.067	
	K-BAR	1.020	1.020	1.020	1.020	1.020	1.020	1.020	
	W-BAR	100.176	100.133	99.850	99.302	98.466	97.343	96.670	
	VZ-BAR	100.176	100.133	99.850	99.302	98.466	97.343	96.670	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.297	0.297	0.296	0.294	0.292	0.288	0.286	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.102	10.104	10.112	10.125	10.125	10.124	10.123	10.119
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.238	9.239	9.245	9.254	9.264	9.275	9.281	
	BETABAR	8.330	10.083	11.629	12.111	11.975	9.732	5.825	
	EPSILON	-0.000	-0.904	-2.555	-4.155	-5.726	-7.321	-8.118	
	K-BAR	0.945	0.945	0.945	0.945	0.944	0.944	0.945	
	V-BAR	120.865	120.889	120.951	121.189	120.510	119.604	119.102	
	VZ-BAR	119.593	119.019	118.468	118.492	117.887	117.878	118.487	
	V-THET-BAR	17.510	21.164	24.381	25.427	25.005	20.217	12.087	
	MACH-BAR	0.360	0.360	0.360	0.361	0.359	0.356	0.354	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.8	-3.7	-3.5	-4.4	-5.9	-9.5	-14.1	
	OMEGABAR	0.048	0.045	0.033	0.011	0.010	0.013	0.015	
	TURNING	-8.3	-10.1	-11.6	-12.1	-12.0	-9.7	-5.8	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.102	10.104	10.112	10.125	10.125	10.124	10.123	10.119
WCOR= 1.408	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3046.2	P-STATIC	8.688	8.694	8.700	8.704	8.707	8.708	8.705	
	BETABAR	6.429	7.870	9.176	9.638	9.559	7.765	4.661	
	EPSILON	-1.170	-1.749	-3.052	-4.313	-5.584	-6.614	-6.637	
	K-BAR	0.945	0.945	0.945	0.945	0.945	0.945	0.945	
	V-BAR	156.263	156.015	156.023	156.464	156.322	156.205	156.288	
	VZ-BAR	155.281	154.543	154.026	154.255	154.152	154.770	155.771	
	V-THET-BAR	17.496	21.361	24.681	26.195	25.958	21.105	12.701	
	MACH-BAR	0.469	0.468	0.468	0.470	0.469	0.469	0.469	
	U-WHEEL	194.285	206.066	211.635	223.202	234.770	246.337	252.121	
	V-BAR-PR	235.301	236.263	242.078	250.215	259.549	273.284	285.633	
	BETABAR-PR	48.706	49.147	50.485	51.939	53.563	55.503	56.951	
	V-THET-B-P	-176.789	-178.707	-186.754	-197.007	-208.811	-225.232	-239.420	
	MACH-BAR-P	0.706	0.709	0.727	0.751	0.779	0.820	0.857	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.086	13.356	13.525	13.451	13.430	13.149	12.745	13.370
ROTOR	T-TOTAL	314.19	314.07	314.58	313.72	313.50	315.62	316.87	314.32
	P-STATIC	10.008	10.071	10.226	10.379	10.512	10.631	10.688	
PR = 1.3213	BETABAR	42.454	43.872	43.735	42.468	41.337	44.055	46.869	
TR = 1.0908	EPSILON	-2.886	-2.589	-3.154	-4.348	-5.525	-6.355	-6.418	
EFF-A = 0.9152	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.9163	V-BAR	215.784	221.106	220.266	212.114	206.333	193.291	176.691	
	VZ-BAR	151.368	159.394	159.151	156.463	154.924	138.914	120.798	
	V-THET-BAR	153.788	153.235	152.276	143.217	136.278	134.402	126.947	
	MACH-BAR	0.631	0.648	0.645	0.620	0.602	0.559	0.508	
	U-WHEEL	192.002	197.634	208.900	220.166	231.431	242.697	248.329	
	W-BAR-PR	156.117	165.465	168.938	174.375	181.818	176.143	169.836	
	BETABAR-PR	14.169	15.562	19.584	26.184	31.557	37.940	44.662	
	V-THET-B-P	-38.215	-44.400	-56.624	-76.949	-95.153	-108.295	-119.382	
	MACH-BAR-P	0.456	0.485	0.494	0.510	0.530	0.510	0.488	
	D-FACTOR	0.538	0.499	0.500	0.489	0.477	0.538	0.586	
	TURNING	34.5	33.6	30.9	25.8	22.0	17.6	12.3	
	INCID-M	-8.7	-7.0	-4.8	-3.6	-3.3	-3.1	-2.8	
	DEVIATION	26.0	19.3	11.0	8.5	6.4	6.7	10.8	
	OMEGABAR-P	0.150	0.077	0.053	0.042	0.037	0.152	0.251	
	LOSS PAR	0.051	0.027	0.019	0.015	0.013	0.053	0.080	
	PT-RATIO	1.295	1.322	1.337	1.328	1.326	1.299	1.259	1.3213
	EFF-AU	0.851	0.924	0.946	0.954	0.957	0.815	0.683	0.9152
	EFF-POLY	0.855	0.926	0.947	0.955	0.958	0.821	0.693	0.9163
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.086	13.352	13.525	13.452	13.432	13.157	12.745	13.370
	T-TOTAL	314.19	314.07	314.59	313.75	313.49	315.58	316.87	314.32
	P-STATIC	10.035	10.064	10.157	10.267	10.379	10.480	10.531	
	BETABAR	45.827	43.923	43.293	41.697	40.341	42.651	44.901	
	EPSILON	-0.113	-1.056	-2.788	-3.767	-5.103	-6.526	-7.479	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	W-BAR	214.718	221.254	222.747	216.385	211.620	199.715	183.799	
	VZ-BAR	149.621	159.364	162.126	161.567	161.297	146.891	130.053	
	V-THET-BAR	154.005	153.475	152.745	143.936	136.990	135.311	129.878	
	MACH-BAR	0.628	0.648	0.653	0.633	0.619	0.579	0.529	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.482	12.886	13.226	13.188	13.230	12.717	12.279	13.040
ROTOR PLUS STATOR	T-TOTAL	314.19	314.07	314.59	313.74	313.49	315.59	316.87	314.32
	P-STATIC	11.156	11.161	11.157	11.135	11.105	11.058	11.032	
PR = 1.2887	BETABAR	12.913	12.493	11.913	12.313	12.369	10.764	8.247	
TR = 1.0908	EPSILON	0.450	-0.101	-1.364	-2.609	-3.753	-4.866	-5.489	
EFF-A = 0.8281	K-BAR	0.935	0.935	0.935	0.935	0.935	0.935	0.935	
EFF-P = 0.8342	V-BAR	141.175	159.259	173.150	172.488	175.324	157.538	138.509	
	VZ-BAR	137.605	155.489	169.420	168.520	171.254	154.765	137.076	
	W-THET-BAR	31.549	34.445	35.742	36.784	37.556	29.426	19.868	
IGV,ROTOR,STATOR	MACH-BAR	0.404	0.458	0.499	0.498	0.506	0.451	0.394	
	EFF-POLY	0.690	0.743	0.806	0.803	0.816	0.611	0.554	
PR = 1.2871	INCID-M	-9.8	-8.7	-7.5	-8.8	-11.2	-11.0	-9.8	
TR = 1.0908	DEVIATION	12.1	11.2	11.0	12.0	13.0	12.7	11.2	
EFF-A = 0.8263	OMEGA-BAR	0.198	0.142	0.089	0.083	0.066	0.164	0.210	
EFF-P = 0.8301	LOSS PAR	0.069	0.050	0.033	0.032	0.027	0.070	0.092	
	D-FACTOR	0.545	0.476	0.424	0.402	0.370	0.444	0.515	
	TURNING	32.9	31.4	31.4	29.4	28.0	31.9	36.7	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 24)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
MCOR= 1.382	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3056.4	P-STATIC	9.540	9.541	9.544	9.550	9.560	9.572	9.580	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.615	-4.222	-5.774	-7.284	-8.067	
	K-BAR	1.010	1.010	1.010	1.010	1.010	1.010	1.010	
	V-BAR	99.287	99.247	98.978	98.437	97.618	96.522	95.851	
	VZ-BAR	99.287	99.247	98.978	98.437	97.618	96.522	95.851	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.294	0.294	0.293	0.292	0.289	0.286	0.284	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.104	10.106	10.113	10.126	10.126	10.125	10.124	10.120
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.273	9.274	9.280	9.289	9.299	9.309	9.315	
	BETABAR	8.327	10.079	11.626	12.102	11.963	9.726	5.814	
	EPSILON	-0.000	-0.879	-2.547	-4.135	-5.733	-7.260	-8.118	
	K-BAR	0.945	0.945	0.945	0.945	0.944	0.944	0.945	
	V-BAR	118.423	118.448	118.567	118.721	118.043	117.164	116.649	
	VZ-BAR	117.175	116.618	116.076	116.082	115.479	115.470	116.049	
	V-THET-BAR	17.150	20.729	23.881	24.890	24.467	19.792	11.816	
	MACH-BAR	0.352	0.352	0.352	0.353	0.351	0.348	0.347	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.8	-3.7	-3.5	-4.4	-5.9	-9.5	-14.1	
	OMEGABAR	0.047	0.044	0.032	0.010	0.009	0.011	0.013	
	TURNING	-8.3	-10.1	-11.6	-12.1	-12.0	-9.7	-5.8	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.104	10.106	10.113	10.126	10.126	10.125	10.124	10.120
MCOR= 1.383	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3056.4	P-STATIC	8.750	8.755	8.760	8.764	8.767	8.769	8.767	
	BETABAR	6.444	7.881	9.165	9.645	9.568	7.780	4.664	
	EPSILON	-1.170	-1.782	-3.277	-4.650	-5.994	-6.854	-6.637	
	K-BAR	0.945	0.945	0.945	0.945	0.945	0.945	0.945	
	V-BAR	152.693	152.478	152.555	152.982	152.813	152.628	152.711	
	VZ-BAR	151.728	151.036	150.599	150.820	150.687	151.219	152.200	
	V-THET-BAR	17.136	20.906	24.362	25.631	25.399	20.661	12.417	
	MACH-BAR	0.458	0.457	0.457	0.459	0.458	0.458	0.458	
	U-WHEEL	194.933	200.735	212.341	223.947	235.553	247.158	252.961	
	W-BAR-PR	233.737	234.842	240.874	249.151	258.596	272.340	284.655	
	BETABAR-PR	49.563	49.973	51.301	52.746	54.357	56.270	57.676	
	V-THET-R-P	-177.796	-179.829	-187.989	-198.316	-210.153	-226.497	-240.545	
	MACH-BAR-P	0.701	0.704	0.722	0.747	0.775	0.817	0.854	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.090	13.431	13.612	13.443	13.484	13.190	12.826	13.422
ROTOR	T-TOTAL	314.59	314.77	315.05	314.14	313.93	316.04	317.56	314.79
PR = 1.3264	P-STATIC	10.193	10.273	10.438	10.584	10.722	10.822	10.865	
TR = 1.0924	BETABAR	47.959	46.235	45.626	44.970	43.326	46.275	49.691	
EFF-A = 0.9117	EPSILON	-2.885	-2.417	-3.133	-4.380	-5.739	-6.482	-6.418	
EFF-P = 0.9132	K-BAR	0.935	0.935	0.935	0.935	0.935	0.935	0.935	
	V-BAR	208.799	215.907	215.040	204.139	199.959	186.028	171.895	
	VZ-BAR	139.826	149.340	150.384	144.423	145.464	129.143	111.200	
	V-THET-BAR	155.067	155.918	153.710	144.272	137.201	134.998	131.082	
	MACH-BAR	0.609	0.631	0.628	0.594	0.582	0.539	0.493	
	U-WHEEL	192.643	198.294	209.596	220.900	232.203	243.506	249.157	
	W-BAR-PR	144.787	155.243	160.447	163.506	173.739	168.701	162.195	
	BETABAR-PR	15.042	15.838	20.366	27.946	33.149	40.043	46.716	
	V-THET-R-P	-37.576	-42.375	-55.887	-76.628	-95.002	-108.508	-116.075	
	MACH-BAR-P	0.422	0.453	0.468	0.476	0.505	0.487	0.465	
	D-FACTOR	0.586	0.544	0.537	0.533	0.510	0.567	0.615	
	TURNING	34.5	34.1	30.9	24.8	21.2	16.2	11.0	
	INCID-M	-7.9	-6.2	-4.0	-2.8	-2.5	-2.4	-2.1	
	DEVIATION	26.9	19.6	11.6	10.3	8.0	8.8	12.9	
	OMEGABAR-P	0.167	0.085	0.050	0.059	0.039	0.157	0.256	
	LOSS PAR	0.056	0.029	0.018	0.021	0.014	0.053	0.079	
	PT-RATIO	1.296	1.329	1.346	1.328	1.332	1.303	1.267	1.3264
	EFF-AD	0.838	0.918	0.950	0.936	0.955	0.812	0.686	0.9117
	EFF-POLY	0.843	0.921	0.951	0.938	0.956	0.818	0.696	0.9132
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.090	13.425	13.614	13.446	13.484	13.199	12.820	13.422
	T-TOTAL	314.59	314.76	315.06	314.17	313.92	316.00	317.56	314.79
	P-STATIC	10.204	10.249	10.366	10.491	10.614	10.716	10.763	
	BETABAR	48.190	46.118	45.082	44.245	42.493	45.208	48.367	
	EPSILON	-0.113	-1.175	-2.765	-4.171	-5.238	-6.884	-7.979	
	K-BAR	0.935	0.935	0.935	0.935	0.935	0.935	0.935	
	V-BAR	208.336	216.643	217.744	207.830	204.191	191.525	176.590	
	VZ-BAR	138.890	150.174	153.748	148.880	150.563	134.943	117.272	
	V-THET-BAR	155.286	156.142	154.188	145.009	137.930	135.908	132.028	
	MACH-BAR	0.607	0.643	0.636	0.606	0.595	0.554	0.507	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.563	12.974	13.340	13.215	13.218	12.854	12.421	13.111
ROTOR PLUS STATOR	T-TOTAL	314.59	314.75	315.07	314.20	313.90	315.94	317.56	314.79
	P-STATIC	11.374	11.381	11.380	11.358	11.330	11.289	11.265	
PR = 1.2956	BETABAR	15.083	13.901	12.033	12.365	12.056	10.988	8.644	
TR = 1.0924	EPSILON	0.450	-0.025	-1.174	-2.382	-3.441	-4.723	-5.489	
EFF-A = 0.8311	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8372	V-BAR	143.056	152.353	167.628	165.474	164.825	151.912	132.530	
	VZ-BAR	128.473	147.895	163.945	159.683	160.821	149.127	131.024	
IGV,ROTOR,STATOR	V-THET-BAR	34.623	36.579	34.945	35.004	36.112	28.954	19.918	
	MACH-BAR	0.380	0.436	0.482	0.470	0.474	0.434	0.376	
PR = 1.2940	EFF-POLY	0.724	0.753	0.819	0.817	0.766	0.666	0.586	
TR = 1.0924	INCID-M	-7.5	-6.5	-5.7	-6.3	-9.0	-8.4	-6.4	
EFF-A = 0.8294	DEVIATION	14.3	12.6	12.1	12.0	13.3	13.0	11.6	
EFF-P = 0.8335	OMEGA-BAR	0.183	0.142	0.084	0.078	0.093	0.140	0.196	
	LOSS PAR	0.063	0.050	0.031	0.030	0.038	0.059	0.086	
	D-FACTOR	0.567	0.496	0.441	0.427	0.403	0.454	0.534	
	TURNING	33.1	32.2	33.0	31.9	29.8	34.2	39.7	

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Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 25)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.354	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3052.1	P-STATIC	9.528	9.528	9.531	9.538	9.547	9.560	9.568	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.613	-4.203	-5.768	-7.270	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	100.379	100.337	100.065	99.522	98.696	97.585	96.906	
	VZ-BAR	100.379	100.337	100.065	99.522	98.696	97.585	96.906	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.297	0.297	0.297	0.295	0.292	0.289	0.287	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.105	10.107	10.114	10.120	10.127	10.126	10.125	10.121
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.301	9.303	9.308	9.316	9.326	9.338	9.342	
	BETABAR	8.201	10.064	11.724	12.097	11.546	9.718	5.922	
	EPSILON	-0.000	-0.879	-2.535	-4.120	-5.702	-7.269	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	116.405	116.420	116.495	116.720	116.086	115.229	114.726	
	VZ-BAR	115.215	114.626	114.065	114.128	113.573	113.572	114.114	
	V-THET-BAR	16.005	20.343	23.670	24.461	24.028	19.451	11.837	
	MACH-BAR	0.346	0.346	0.346	0.347	0.345	0.342	0.341	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.9	-3.7	-3.4	-4.4	-5.9	-9.5	-14.0	
	OMEGABAR	0.044	0.041	0.029	0.009	0.008	0.009	0.011	
	TURNING	-8.2	-10.1	-11.7	-12.1	-11.9	-9.7	-5.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.105	10.107	10.114	10.126	10.127	10.126	10.125	10.121
WCOR= 1.356	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3052.1	P-STATIC	8.797	8.802	8.808	8.812	8.816	8.818	8.815	
	BETABAR	6.354	7.878	9.275	9.658	9.275	7.794	4.781	
	EPSILON	-1.170	-1.730	-3.217	-4.573	-5.827	-6.800	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	149.922	149.711	149.759	150.118	149.946	149.796	149.869	
	VZ-BAR	149.001	148.296	147.861	147.991	147.857	148.409	149.352	
	V-THET-BAR	16.592	20.521	24.136	25.185	24.942	20.313	12.438	
	MACH-BAR	0.449	0.449	0.449	0.450	0.449	0.449	0.449	
	U-WHEEL	194.659	200.453	212.042	223.632	235.222	246.811	252.606	
	V-BAR-PR	232.184	233.169	239.070	247.555	257.060	270.791	282.819	
	BETABAR-PR	50.078	50.505	51.812	53.286	54.686	56.764	58.124	
	V-THET-B-P	-178.067	-179.932	-187.906	-198.447	-210.279	-226.498	-240.168	
	MACH-BAR-P	0.696	0.699	0.716	0.742	0.770	0.811	0.847	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.110	13.483	13.689	13.482	13.522	13.259	12.997	13.476
ROTOR	T-TOTAL	314.97	315.28	315.37	314.52	314.48	316.39	316.13	315.21
	P-STATIC	10.332	10.412	10.571	10.709	10.834	10.944	10.996	
PR = 1.3316	BETABAR	50.183	46.197	46.923	46.584	45.024	47.770	52.358	
TR = 1.0939	EPSILON	-2.885	-2.375	-3.240	-4.454	-5.519	-6.403	-6.418	
EFF-A = 0.9102	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9120	V-BAR	203.984	212.338	212.383	200.560	196.887	184.145	168.694	
	VZ-BAR	150.620	141.541	145.052	137.840	139.161	123.774	103.026	
	V-THET-BAR	156.678	156.279	155.153	145.686	139.279	136.332	133.579	
	MACH-BAR	0.593	0.614	0.619	0.585	0.572	0.531	0.483	
	U-WHEEL	192.372	198.015	209.302	220.589	231.877	243.164	248.807	
	V-BAR-PR	130.409	147.014	154.852	156.893	167.156	163.526	154.570	
	BETABAR-PR	15.284	15.679	20.476	28.516	33.639	40.805	48.200	
	V-THET-B-P	-35.694	-39.736	-54.169	-74.904	-92.598	-106.832	-115.228	
	MACH-BAR-P	0.394	0.429	0.451	0.456	0.485	0.471	0.442	
	D-FACTOR	0.627	0.581	0.559	0.560	0.536	0.586	0.644	
	TURNING	34.8	34.8	31.3	24.8	21.2	16.0	9.9	
	INCID-M	-7.3	-5.6	-3.5	-2.3	-2.0	-1.9	-1.7	
	DEVIATION	27.1	19.4	11.9	10.8	8.4	9.6	14.4	
	OMEGABAR-P	0.178	0.093	0.044	0.064	0.050	0.125	0.201	
	LOSS PAR	0.060	0.052	0.016	0.022	0.017	0.052	0.078	
	PI-RATIO	1.297	1.334	1.353	1.331	1.335	1.309	1.274	1.3316
	EFF-AD	0.831	0.913	0.957	0.932	0.944	0.818	0.689	0.9102
	EFF-POLY	0.856	0.916	0.959	0.934	0.945	0.824	0.699	0.9120
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.110	13.476	13.692	13.485	13.522	13.269	12.997	13.476
	T-TOTAL	314.97	315.28	315.38	314.54	314.46	316.34	318.13	315.21
	P-STATIC	10.312	10.365	10.489	10.614	10.750	10.868	10.918	
	BETABAR	50.012	47.815	46.234	45.747	44.374	46.984	51.323	
	EPSILON	-0.113	-1.063	-2.313	-3.685	-5.057	-6.462	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	204.780	213.894	215.515	204.413	200.184	187.702	172.340	
	VZ-BAR	131.596	143.640	149.074	142.643	143.090	128.053	107.700	
	V-THET-BAR	156.899	156.480	155.638	146.415	139.996	137.234	134.543	
	MACH-BAR	0.596	0.624	0.629	0.595	0.582	0.542	0.494	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.664	13.073	13.415	13.274	13.253	12.905	12.542	13.176
ROTOR PLUS STATOR	T-TOTAL	314.97	315.26	315.39	314.55	314.46	316.30	318.13	315.21
	P-STATIC	11.437	11.444	11.443	11.424	11.397	11.359	11.337	
PR = 1.3019	BETABAR	15.001	13.786	12.255	12.367	12.876	12.048	8.887	
TR = 1.0939	EPSILON	0.450	-0.085	-1.287	-2.526	-3.694	-4.774	-5.489	
EFF-A = 0.8341	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8402	V-BAR	134.775	153.741	167.753	162.849	163.260	150.804	134.863	
	VZ-BAR	130.182	149.316	163.930	159.119	159.155	147.482	133.244	
	V-THET-BAR	34.885	36.613	35.609	34.889	36.379	31.476	20.833	
IGV,ROTOR,STATOR	MACH-BAR	0.384	0.440	0.482	0.468	0.469	0.431	0.383	
	EFF-POLY	0.749	0.766	0.808	0.821	0.743	0.616	0.574	
PR = 1.3005	INCID-M	-5.6	-4.8	-4.6	-4.8	-7.1	-6.6	-3.5	
TR = 1.0939	DEVIATION	14.2	12.5	11.4	12.0	13.5	14.0	11.8	
EFF-A = 0.8326	OMEGA-BAR	0.159	0.129	0.086	0.073	0.097	0.152	0.179	
EFF-P = 0.8367	LOSS PAR	0.055	0.046	0.032	0.029	0.039	0.064	0.078	
	D-FACTOR	0.553	0.488	0.435	0.423	0.403	0.445	0.514	
	TURNING	35.0	34.0	34.0	33.4	31.5	34.9	42.4	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 26)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.320	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3058.9	P-STATIC	9.548	9.548	9.551	9.558	9.567	9.579	9.587	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.611	-4.218	-5.766	-7.290	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	98.647	98.607	98.337	97.796	96.980	95.886	95.222	
	VZ-BAR	98.647	98.607	98.337	97.796	96.980	95.886	95.222	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.292	0.292	0.291	0.290	0.287	0.284	0.282	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.107	10.108	10.115	10.127	10.128	10.127	10.126	10.122
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.364	9.366	9.371	9.378	9.387	9.397	9.402	
	BETABAR	8.205	10.077	11.722	12.090	11.929	9.697	5.913	
	EPSILON	-0.000	-0.879	-2.542	-4.159	-5.716	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	111.715	111.739	111.841	112.075	111.476	110.021	110.174	
	VZ-BAR	110.571	110.013	109.509	109.589	109.068	109.067	109.588	
	V-THET-BAR	15.944	19.551	22.722	23.475	23.042	18.637	11.450	
	MACH-BAR	0.332	0.332	0.332	0.333	0.331	0.329	0.327	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.9	-3.7	-3.4	-4.4	-6.0	-9.5	-14.0	
	OMEGABAR	0.042	0.040	0.026	0.008	0.007	0.008	0.010	
	TURNING	-8.2	-10.1	-11.7	-12.1	-11.9	-9.7	-5.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.107	10.108	10.116	10.127	10.128	10.127	10.126	10.122
WCOR= 1.321	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3056.9	P-STATIC	8.905	8.910	8.915	8.919	8.924	8.926	8.924	
	BETABAR	6.378	7.916	9.310	9.690	9.602	7.808	4.775	
	EPSILON	-1.170	-1.783	-3.328	-4.799	-6.050	-6.861	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	143.400	143.197	143.270	143.623	143.393	143.223	143.274	
	VZ-BAR	142.518	141.830	141.383	141.574	141.384	141.892	142.776	
	V-THET-BAR	15.932	19.721	23.177	24.174	23.919	19.456	11.927	
	MACH-BAR	0.429	0.428	0.429	0.430	0.429	0.428	0.429	
	U-WHEEL	195.093	200.900	212.515	224.131	235.746	247.362	253.169	
	V-BAR-MR	228.953	230.091	236.302	245.003	254.678	268.469	280.327	
	BETABAR-MR	51.499	51.945	53.250	54.760	56.276	58.093	59.381	
	V-THET-B-P	-179.161	-181.178	-189.339	-199.957	-211.827	-227.906	-241.243	
	MACH-BAR-P	0.685	0.688	0.707	0.733	0.762	0.803	0.859	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.130	13.543	13.811	13.552	13.565	13.241	12.948	13.534
ROTOR	T-TOTAL	315.31	316.07	316.05	315.04	315.08	317.03	318.66	315.85
------	P-STATIC	10.471	10.556	10.742	10.893	11.026	11.143	11.198	
PR = 1.3371	BETABAR	54.262	50.509	48.536	48.610	47.471	51.586	56.634	
TR = 1.0961	EPSILON	-2.885	-2.396	-3.347	-4.657	-5.772	-6.587	-6.418	
EFF-A = 0.9027	K-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
EFF-P = 0.9049	V-BAR	199.152	204.887	209.750	195.680	190.742	174.979	161.277	
	VZ-BAR	121.892	132.847	138.886	129.380	126.935	107.775	88.229	
	V-THET-BAR	157.492	161.195	157.180	146.804	140.563	137.833	135.004	
	MACH-BAR	0.578	0.607	0.610	0.567	0.552	0.502	0.460	
	U-WHEEL	192.801	198.456	209.769	221.081	232.394	243.706	249.362	
	V-BAR-MR	160.903	137.974	148.224	149.200	158.296	151.109	144.457	
	BETABAR-MR	10.155	15.666	20.736	29.859	35.460	44.496	52.350	
	V-THET-B-P	-35.309	-37.261	-52.586	-74.278	-91.831	-105.673	-114.358	
	MACH-BAR-P	0.368	0.401	0.432	0.433	0.458	0.434	0.412	
	D-FACTOR	0.661	0.620	0.585	0.590	0.571	0.632	0.660	
	TURNING	35.3	36.3	32.5	24.8	20.8	13.6	7.0	
	INCID-M	-5.9	-4.2	-2.6	-0.9	-0.6	-0.5	-0.4	
	DEVIATION	28.0	29.4	12.1	12.2	10.3	13.3	18.5	
	OMEGABAR-P	0.192	0.111	0.041	0.067	0.081	0.180	0.270	
	LOSS PAR	0.064	0.039	0.015	0.023	0.021	0.056	0.074	
	PT-RATIO	1.299	1.340	1.365	1.338	1.339	1.308	1.279	1.3371
	EFF-AD	0.825	0.901	0.962	0.931	0.933	0.796	0.688	0.9027
	EFF-POLY	0.631	0.904	0.963	0.933	0.935	0.802	0.698	0.9049
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.130	13.537	13.813	13.558	13.566	13.240	12.948	13.534
	T-TOTAL	315.31	316.06	316.07	315.07	315.06	317.00	318.66	315.85
	P-STATIC	10.481	10.542	10.686	10.817	10.944	11.047	11.097	
	BETABAR	52.521	50.496	48.110	47.898	46.712	50.669	54.957	
	EPSILON	-0.113	-1.337	-2.670	-3.993	-5.346	-6.854	-7.979	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	198.738	209.207	211.883	198.863	194.099	179.399	166.127	
	VZ-BAR	120.925	133.092	141.472	133.329	133.086	113.711	95.435	
	V-THET-BAR	157.714	161.405	157.763	147.546	141.289	138.749	135.978	
	MACH-BAR	0.577	0.608	0.617	0.577	0.566	0.516	0.474	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.765	13.190	13.518	13.334	13.268	12.943	12.624	13.241
ROTOR PLUS STATOR	T-TOTAL	315.31	316.04	316.08	315.08	315.04	316.94	318.68	315.85
----------	P-STATIC	11.761	11.767	11.765	11.745	11.719	11.686	11.668	
PR = 1.3082	BETABAR	15.274	14.113	12.479	12.496	13.016	12.499	10.514	
TR = 1.0961	EPSILON	0.450	-0.066	-1.244	-2.415	-3.512	-4.681	-5.489	
EFF-A = 0.8306	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
EFF-P = 0.8369	V-BAR	121.671	142.669	157.201	150.155	148.513	135.359	119.360	
	VZ-BAR	116.794	138.366	153.486	146.599	144.697	132.253	117.356	
	V-THET-BAR	31.895	34.767	33.969	32.487	33.449	28.833	21.781	
IGV,ROTOR,STATOR	MACH-BAR	0.344	0.407	0.450	0.430	0.425	0.385	0.337	
----------	EFF-POLY	0.802	0.809	0.814	0.829	0.756	0.713	0.663	
PR = 1.3070	INCID-M	-3.1	-2.2	-2.7	-2.0	-4.8	-3.0	0.2	
TR = 1.0961	DEVIATION	14.5	12.8	11.6	12.1	13.6	14.3	13.5	
EFF-A = 0.8293	OMEGA-BAR	0.138	0.116	0.094	0.081	0.116	0.138	0.175	
EFF-P = 0.8339	LOSS PAR	0.047	0.041	0.035	0.032	0.046	0.058	0.076	
	D-FACTOR	0.615	0.536	0.482	0.478	0.469	0.516	0.590	
	TURNING	37.2	36.4	35.6	35.4	33.7	38.4	44.4	

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Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 27)

STATION DESCRIPTION	PARAMETER	PERCENT-OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.287	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3047.9	P-STATIC	9.579	9.579	9.582	9.588	9.597	9.609	9.616	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.926	-2.584	-4.223	-5.761	-7.268	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	95.937	95.896	95.637	95.118	94.328	93.274	92.629	
	VZ-BAR	95.937	95.896	95.637	95.118	94.328	93.274	92.629	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.284	0.284	0.283	0.282	0.279	0.276	0.274	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.106	10.110	10.116	10.127	10.128	10.128	10.127	10.122
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.369	9.391	9.398	9.403	9.412	9.421	9.426	
	BETABAR	8.084	10.067	11.717	12.089	12.020	9.691	6.019	
	EPSILON	-0.000	-0.887	-2.511	-4.144	-5.706	-7.282	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	109.881	109.897	109.986	110.206	109.608	108.808	108.335	
	VZ-BAR	108.789	108.203	107.694	107.756	107.204	107.251	107.738	
	V-THET-BAR	15.451	19.209	22.336	23.079	22.827	18.316	11.360	
	MACH-BAR	0.326	0.326	0.327	0.327	0.325	0.323	0.322	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.0	-3.7	-3.4	-4.4	-5.9	-9.5	-13.9	
	OMEGABAR	0.042	0.039	0.027	0.006	0.006	0.007	0.009	
	TURNING	-8.1	-10.1	-11.7	-12.1	-12.0	-9.7	-6.0	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.108	10.110	10.117	10.127	10.128	10.128	10.127	10.122
WCOR= 1.288	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3047.9	P-STATIC	8.947	8.952	8.956	8.961	8.966	8.968	8.966	
	BETABAR	6.294	7.921	9.317	9.700	9.689	7.816	4.869	
	EPSILON	-1.170	-1.743	-3.322	-4.896	-6.427	-6.971	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	140.627	140.624	140.722	141.045	140.796	140.597	140.654	
	VZ-BAR	139.979	139.280	138.865	139.029	138.787	139.288	140.144	
	V-THET-BAR	15.439	19.379	22.782	23.703	23.695	19.121	11.937	
	MACH-BAR	0.421	0.420	0.421	0.422	0.421	0.420	0.420	
	U-WHEEL	194.392	200.178	211.752	223.325	234.899	246.473	252.259	
	V-BAR-PR	227.196	228.227	234.507	243.217	252.725	266.029	278.200	
	BETABAR-PR	52.987	52.391	53.689	55.135	56.089	58.505	59.751	
	V-THET-B-P	-178.953	-180.799	-188.969	-199.562	-211.204	-227.352	-240.362	
	MACH-BAR-P	0.679	0.682	0.701	0.727	0.755	0.797	0.832	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.140	13.601	13.895	13.614	13.592	13.272	12.988	13.589
ROTOR	T-TOTAL	315.72	316.44	316.45	315.49	315.81	317.24	319.12	316.28
------	P-STATIC	10.396	10.493	10.684	10.829	10.966	11.074	11.121	
PR = 1.3425	BETABAR	52.000	49.982	47.934	46.011	47.779	50.703	55.374	
TR = 1.0976	EPSILON	-2.885	-2.408	-3.368	-4.683	-5.979	-6.602	-6.418	
EFF-A = 0.9013	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.9039	V-BAR	202.570	213.099	214.442	200.320	194.305	179.229	166.747	
	VZ-BAR	124.713	137.034	143.073	134.013	130.572	113.525	94.749	
	V-THET-BAR	159.628	163.189	159.196	148.891	143.894	138.675	137.212	
	MACH-BAR	0.588	0.620	0.624	0.581	0.562	0.515	0.476	
	U-WHEEL	192.108	197.743	209.015	220.287	231.559	242.830	248.466	
	V-BAR-PR	122.874	141.324	152.081	151.854	157.274	154.099	146.132	
	BETABAR-PR	14.598	14.150	19.122	28.047	33.877	42.544	49.581	
	V-THET-B-P	-32.480	-34.554	-49.819	-71.395	-87.665	-104.155	-111.254	
	MACH-BAR-P	0.374	0.411	0.443	0.441	0.455	0.443	0.417	
	D-FACTOR	0.655	0.606	0.571	0.581	0.578	0.621	0.675	
	TURNING	37.4	38.2	34.6	27.1	22.8	16.0	10.2	
	INCID-M	-5.4	-3.7	-1.6	-0.4	-0.2	-0.1	-0.0	
	DEVIATION	26.5	17.9	10.5	10.4	8.7	11.3	15.7	
	OMEGABAR-P	0.208	0.113	0.036	0.069	0.080	0.182	0.278	
	LOSS PAR	0.070	0.039	0.013	0.024	0.028	0.059	0.081	
	PT-RATIO	1.300	1.345	1.375	1.344	1.342	1.310	1.283	1.3425
	EFF-AD	0.815	0.902	0.967	0.931	0.915	0.797	0.687	0.9013
	EFF-POLY	0.821	0.905	0.968	0.933	0.918	0.804	0.697	0.9039
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.140	13.593	13.897	13.621	13.595	13.278	12.988	13.589
	T-TOTAL	315.72	316.43	316.47	315.51	315.79	317.20	319.12	316.28
	P-STATIC	10.408	10.474	10.623	10.756	10.879	10.985	11.036	
	BETABAR	52.258	49.918	47.490	47.375	46.988	49.613	54.045	
	EPSILON	-0.113	-1.115	-2.671	-4.260	-5.329	-6.812	-7.979	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	202.149	213.575	216.714	203.348	197.855	183.279	170.732	
	VZ-BAR	123.738	137.526	146.436	137.707	134.968	118.784	100.246	
	V-THET-BAR	159.854	163.394	159.754	149.624	144.673	139.582	138.205	
	MACH-BAR	0.587	0.622	0.631	0.591	0.573	0.527	0.488	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1582	
	P-TOTAL	12.775	13.240	13.563	13.392	13.510	12.960	12.693	13.285
ROTOR PLUS STATOR	T-TOTAL	315.72	316.42	316.48	315.54	315.77	317.12	319.12	316.28
----------	P-STATIC	11.071	11.678	11.676	11.654	11.626	11.589	11.570	
PR = 1.3124	BETABAR	15.249	14.182	12.551	12.461	12.904	11.941	10.466	
TR = 1.0976	EPSILON	0.450	-0.114	-1.247	-2.368	-3.495	-4.685	-5.489	
EFF-A = 0.8280	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8345	V-BAR	127.140	149.559	163.242	157.106	155.079	141.518	129.410	
	VZ-BAR	122.664	145.005	159.341	153.467	151.164	138.455	127.257	
	V-THET-BAR	33.440	36.621	35.472	33.898	34.632	29.282	23.507	
IGV,ROTOR,STATOR	MACH-BAR	0.362	0.427	0.468	0.450	0.444	0.403	0.366	
----------	EFF-POLY	0.801	0.805	0.793	0.822	0.758	0.695	0.672	
PR = 1.3113	INCID-M	-3.4	-2.7	-3.3	-3.1	-4.5	-6.0	-8.7	
TR = 1.0976	DEVIATION	14.2	12.9	11.7	12.1	13.5	13.9	13.4	
EFF-A = 0.8267	OMEGA-BAR	0.134	0.113	0.102	0.080	0.105	0.139	0.151	
EFF-P = 0.8317	LOSS PAR	0.046	0.040	0.038	0.031	0.043	0.059	0.066	
	D-FACTOR	0.593	0.515	0.467	0.457	0.491	0.494	0.544	
	TURNING	37.0	35.7	34.9	34.9	34.1	37.7	43.6	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 28)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.238	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3044.9	P-STATIC	9.643	9.643	9.646	9.651	9.659	9.669	9.675	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.584	-4.222	-5.757	-7.288	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	90.098	90.062	89.820	89.335	88.604	87.617	87.013	
	VZ-BAR	90.098	90.062	89.820	89.335	88.604	87.617	87.013	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.267	0.266	0.266	0.264	0.262	0.259	0.257	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.110	10.112	10.118	10.128	10.129	10.129	10.128	10.123
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.482	9.483	9.487	9.494	9.502	9.510	9.515	
	BETABAR	7.953	10.045	11.698	12.063	11.992	9.767	5.991	
	EPSILON	-0.000	-0.879	-2.511	-4.135	-5.683	-7.282	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	102.549	102.557	102.671	102.906	102.362	101.026	101.181	
	VZ-BAR	101.562	100.982	100.539	100.631	100.128	100.152	100.026	
	V-THET-BAR	14.189	17.887	20.817	21.506	21.268	17.240	10.560	
	MACH-BAR	0.304	0.304	0.304	0.305	0.303	0.301	0.300	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.1	-3.7	-3.4	-4.4	-5.9	-9.5	-13.9	
	OMEGABAR	0.043	0.041	0.028	0.007	0.005	0.006	0.008	
	TURNING	-8.0	-10.0	-11.7	-12.1	-12.0	-9.8	-8.0	
ROTOR LEADING EDGE	DIAMETER	0.1270	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.110	10.112	10.118	10.128	10.129	10.129	10.128	10.123
WCOR= 1.239	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3044.9	P-STATIC	9.102	9.106	9.110	9.114	9.119	9.123	9.121	
	BETABAR	6.221	7.942	9.346	9.725	9.718	7.924	4.874	
	EPSILON	-1.170	-1.699	-3.377	-5.205	-6.757	-7.361	-8.037	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	130.834	130.619	130.736	131.090	130.793	130.556	130.613	
	VZ-BAR	130.064	129.364	129.000	129.206	128.910	129.307	130.141	
	V-THET-BAR	14.178	18.047	21.232	22.144	22.078	17.998	11.097	
	MACH-BAR	0.390	0.390	0.390	0.391	0.390	0.389	0.389	
	U-WHEEL	194.205	199.985	211.546	223.110	234.673	246.235	252.017	
	V-BAR-PR	222.095	223.241	229.917	238.919	248.629	262.323	273.823	
	BETABAR-PR	54.153	54.586	55.869	57.261	58.767	60.465	61.623	
	V-THET-B-P	-180.027	-181.938	-190.316	-200.966	-214.594	-228.237	-240.920	
	MACH-BAR-P	0.662	0.666	0.688	0.713	0.741	0.782	0.817	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
ROTOR	P-TOTAL	13.170	13.683	14.034	13.747	13.626	13.275	13.008	13.679
	T-TOTAL	316.21	316.94	317.12	315.82	316.22	318.17	319.55	316.81
PR = 1.3512	P-STATIC	10.555	10.641	10.834	10.996	11.126	11.241	11.299	
TR = 1.0994	BETABAR	54.701	51.539	49.070	48.797	49.701	55.090	60.293	
EFF-A = 0.9052	EPSILON	-2.885	-2.479	-3.208	-4.875	-6.193	-6.703	-6.418	
EFF-P = 0.9076	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	197.339	210.068	213.072	196.030	189.030	172.177	159.149	
	VZ-BAR	114.031	130.671	139.589	130.448	122.263	98.366	78.869	
	V-THET-BAR	161.658	164.468	160.980	148.994	144.161	141.135	138.231	
	MACH-BAR	0.571	0.610	0.619	0.574	0.546	0.493	0.453	
	U-WHEEL	191.923	197.553	208.814	220.075	231.336	242.597	248.227	
	V-BAR-PR	118.134	134.794	147.570	148.563	150.178	141.534	135.344	
	BETABAR-PR	15.146	14.208	18.913	28.585	35.493	43.849	54.359	
	V-THET-B-P	-30.865	-33.065	-47.834	-71.080	-87.175	-101.461	-109.995	
	MACH-BAR-P	0.342	0.391	0.469	0.430	0.434	0.405	0.385	
	D-FACTOR	0.698	0.631	0.588	0.591	0.604	0.670	0.712	
	TURNING	39.0	40.4	37.0	28.7	23.3	14.6	7.3	
	INCID-M	-3.2	-1.5	0.6	1.7	1.9	1.8	1.8	
	DEVIATION	27.0	17.9	10.5	10.9	10.3	14.6	20.5	
	OMEGABAR-P	0.229	0.116	0.069	0.051	0.089	0.213	0.294	
	LOSS PAR	0.077	0.041	0.010	0.018	0.030	0.065	0.077	
	P1-RATIO	1.305	1.353	1.387	1.357	1.345	1.311	1.284	1.3512
	EFF-AD	0.867	0.904	0.976	0.951	0.909	0.773	0.661	0.9052
	EFF-POLY	0.814	0.968	0.976	0.952	0.912	0.780	0.692	0.9076
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.170	13.[illegible]74	14.034	13.752	13.633	13.285	13.008	13.679
	T-TOTAL	316.21	31[illegible]3	317.14	315.84	316.18	318.12	319.55	316.81
	P-STATIC	10.551	10. 14	10.769	10.924	11.057	11.181	11.241	
	BETABAR	54.749	51.373	48.567	48.150	48.945	54.195	59.279	
	EPSILON	-0.113	-1.158	-2.970	-4.178	-5.806	-6.664	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	197.501	210.819	215.481	200.964	192.064	175.227	161.958	
	VZ-BAR	113.996	131.017	142.591	134.080	126.149	102.538	82.739	
	V-THET-BAR	16 .'86	164.669	161.553	149.697	144.823	142.063	139.229	
	MACH-BAR	[illegible]572	0.612	0.627	0.585	0.555	0.502	0.461	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1295	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.818	13.332	13.609	13.433	13.339	12.984	12.745	13.331
ROTOR PLUS STATOR	T-TOTAL	316.21	316.94	317.14	315.89	316.08	317.98	319.55	316.81
	P-STATIC	11.866	11.873	11.867	11.845	11.820	11.788	11.772	
PR = 1.3168	BETABAR	14.980	12.819	12.304	12.222	12.165	11.560	10.255	
TR = 1.0994	EPSILON	0.450	-0.266	-1.309	-2.208	-3.092	-4.457	-5.489	
EFF-A = 0.8231	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8298	V-BAR	117.702	143.946	156.367	149.665	146.831	131.877	119.994	
	VZ-BAR	113.703	140.362	152.775	146.473	143.534	129.201	118.078	
	V-THET-BAR	30.424	31.908	33.322	31.683	30.940	26.430	21.361	
IGV,ROTOR,STATOR	MACH-BAR	0.334	0.410	0.447	0.428	0.419	0.374	0.339	
	EFF-POLY	0.811	0.814	0.757	0.770	0.761	0.711	0.692	
PR = 1.3158	INCID-M	-0.9	-1.3	-2.3	-2.4	-2.0	0.0	4.5	
TR = 1.0994	DEVIATION	14.2	11.5	11.4	11.9	12.8	13.5	13.2	
EFF-A = 0.8223	OMEGA-BAR	0.135	0.112	0.130	0.113	0.114	0.143	0.149	
EFF-P = 0.8275	LOSS PAR	0.046	0.040	0.049	0.044	0.046	0.060	0.065	
	D-FACTOR	0.639	0.547	0.503	0.494	0.487	0.540	0.586	
	TURNING	39.8	38.6	36.3	35.9	36.8	42.6	49.0	

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Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 29)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.191	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3052.2	P-STATIC	9.681	9.682	9.684	9.689	9.696	9.705	9.711	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.596	-4.197	-5.773	-7.288	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	86.410	86.375	86.184	85.684	84.981	84.032	83.454	
	VZ-BAR	86.410	86.375	86.184	85.684	84.981	84.032	83.454	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.256	0.255	0.255	0.253	0.251	0.248	0.247	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.112	10.113	10.119	10.128	10.129	10.129	10.128	10.124
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.518	9.519	9.523	9.530	9.537	9.545	9.549	
	BETABAR	7.835	10.029	11.703	12.053	11.970	9.742	6.084	
	EPSILON	-0.000	-0.879	-2.530	-4.128	-5.702	-7.282	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	99.641	99.633	99.730	99.940	99.403	98.701	98.281	
	VZ-BAR	98.711	98.108	97.656	97.737	97.241	97.274	97.727	
	V-THET-BAR	13.583	17.349	20.228	20.868	20.617	16.702	10.416	
	MACH-BAR	0.295	0.295	0.296	0.296	0.295	0.292	0.291	
	INCID-H	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.2	-3.7	-3.4	-4.5	-5.9	-9.5	-13.8	
	OMEGABAR	0.043	0.041	0.028	0.007	0.005	0.005	0.007	
	TURNING	-7.8	-10.0	-11.7	-12.1	-12.0	-9.7	-6.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.112	10.113	10.119	10.128	10.129	10.129	10.128	10.124
WCOR= 1.192	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3052.2	P-STATIC	9.162	9.165	9.168	9.172	9.179	9.183	9.182	
	BETABAR	6.141	7.944	9.359	9.732	9.720	7.928	4.963	
	EPSILON	-1.170	-1.618	-3.504	-5.524	-7.215	-7.763	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	126.878	126.686	126.863	127.154	126.763	126.440	126.515	
	VZ-BAR	126.150	125.468	125.174	125.324	124.943	125.229	126.041	
	V-THET-BAR	13.572	17.507	20.631	21.493	21.401	17.438	10.945	
	MACH-BAR	0.378	0.377	0.378	0.379	0.378	0.377	0.377	
	U-WHEEL	194.666	200.460	212.050	223.640	235.230	246.820	252.615	
	V-BAR-PR	220.700	221.842	228.715	237.844	247.657	261.341	272.562	
	BETABAR-PR	55.139	55.558	56.817	58.202	59.701	61.367	62.456	
	V-THET-B-P	-181.093	-182.953	-191.419	-202.147	-213.828	-229.382	-241.669	
	MACH-BAR-P	0.658	0.661	0.681	0.709	0.738	0.779	0.812	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.880	13.743	14.159	13.929	13.643	13.262	12.928	13.764
ROTOR	T-TOTAL	316.69	317.34	317.43	315.84	316.62	318.53	319.87	317.07
PR = 1.3595	P-STATIC	10.655	10.748	10.953	11.118	11.244	11.364	11.422	
TR = 1.1003	BETABAR	62.597	52.825	49.536	48.136	51.569	58.441	68.495	
EFF-A = 0.9161	EPSILON	-2.885	-2.199	-3.453	-5.166	-6.604	-6.919	-6.418	
EFF-P = 0.9180	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	183.198	207.851	212.354	198.937	184.930	166.145	149.464	
	VZ-BAR	84.316	125.633	137.810	132.767	114.955	87.019	54.790	
	V-THET-BAR	162.642	165.523	161.563	148.150	144.849	141.443	139.059	
	MACH-BAR	0.528	0.603	0.617	0.577	0.533	0.475	0.424	
	U-WHEEL	192.379	198.022	209.309	220.597	231.885	243.172	248.816	
	V-BAR-PR	89.406	129.770	145.856	151.264	144.209	134.024	122.672	
	BETABAR-PR	19.427	14.515	13.108	28.622	37.138	49.505	63.472	
	V-THET-B-P	-29.737	-32.499	-47.746	-72.447	-87.035	-101.729	-109.757	
	MACH-BAR-P	0.257	0.376	0.424	0.438	0.416	0.383	0.348	
	D-FACTOR	0.830	0.654	0.595	0.578	0.629	0.700	0.759	
	TURNING	35.7	41.0	37.7	29.6	22.6	11.9	-1.0	
	INCID-H	-2.3	-0.6	1.5	2.7	2.8	2.7	2.7	
	DEVIATION	31.3	38.3	10.5	11.0	11.9	18.3	29.6	
	OMEGABAR-P	0.334	0.119	0.009	0.008	0.099	0.227	0.321	
	LOSS PAR	0.110	0.041	0.003	0.003	0.033	0.065	0.064	
	PT-RATIO	1.274	1.359	1.399	1.375	1.347	1.309	1.276	1.3595
	EFF-AD	0.723	0.905	0.992	0.993	0.900	0.761	0.657	0.9161
	EFF-POLY	0.732	0.909	0.992	0.993	0.904	0.769	0.668	0.9180
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.880	13.728	14.160	13.938	13.653	13.273	12.928	13.764
	T-TOTAL	316.69	317.33	317.45	315.84	316.57	318.48	319.87	317.07
	P-STATIC	10.651	10.732	10.907	11.057	11.179	11.291	11.350	
	BETABAR	62.670	52.852	49.238	47.602	50.758	56.974	66.145	
	EPSILON	-0.113	-1.540	-2.969	-4.231	-5.499	-6.715	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	183.336	208.053	214.081	201.516	187.898	169.932	153.146	
	VZ-BAR	84.172	125.682	139.776	135.879	118.871	92.669	61.936	
	V-THET-BAR	162.871	165.732	162.151	148.814	145.507	142.365	140.063	
	MACH-BAR	0.528	0.603	0.622	0.585	0.542	0.486	0.435	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.449	13.321	13.621	13.471	13.307	12.986	12.449	13.326
ROTOR PLUS STATOR	T-TOTAL	316.69	317.34	317.47	315.91	316.39	318.25	319.87	317.07
PR = 1.3163	P-STATIC	11.994	12.002	11.997	11.977	11.954	11.925	11.910	
TR = 1.1003	BETABAR	14.877	13.469	12.471	12.208	11.875	11.101	9.625	
EFF-A = 0.8185	EPSILON	0.450	-0.374	-1.196	-1.936	-2.725	-4.178	-5.489	
EFF-P = 0.8216	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	82.038	136.478	150.784	144.788	138.472	123.934	89.865	
	VZ-BAR	79.288	132.726	147.187	141.514	135.508	121.611	88.600	
	V-THET-BAR	21.063	31.758	32.554	30.618	28.498	23.876	15.026	
IGV,ROTOR,STATOR	MACH-BAR	0.231	0.388	0.430	0.413	0.394	0.351	0.252	
	EFF-POLY	0.776	0.786	0.708	0.695	0.738	0.737	0.560	
PR = 1.3154	INCID-H	7.0	0.2	-1.6	-2.9	-0.8	3.3	11.4	
TR = 1.1003	DEVIATION	14.1	12.2	11.6	11.8	12.5	13.1	12.6	
EFF-A = 0.8140	OMEGA-BAR	0.193	0.136	0.166	0.162	0.140	0.145	0.304	
EFF-P = 0.8194	LOSS PAR	0.066	0.048	0.062	0.063	0.057	0.061	0.132	
	D-FACTOR	0.827	0.580	0.528	0.521	0.528	0.583	0.779	
	TURNING	47.8	39.4	36.8	35.4	38.9	45.9	56.5	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 30)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.207	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2533.8	P-STATIC	9.668	9.669	9.671	9.676	9.684	9.694	9.700	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.926	-2.609	-4.235	-5.788	-7.291	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	87.690	87.650	87.401	86.911	86.177	85.202	84.610	
	VZ-BAR	87.690	87.650	87.401	86.911	86.177	85.202	84.610	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.259	0.259	0.258	0.257	0.255	0.252	0.250	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.112	10.113	10.119	10.128	10.129	10.129	10.128	10.124
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.501	9.502	9.506	9.512	9.519	9.527	9.531	
	BETABAR	7.816	10.012	11.671	12.031	11.983	9.768	5.110	
	EPSILON	-0.000	-0.903	-2.560	-4.152	-5.745	-7.287	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	101.053	101.034	101.183	101.410	100.896	100.232	99.832	
	VZ-BAR	100.114	99.493	99.052	99.182	98.697	98.775	99.265	
	V-THET-BAR	13.742	17.565	20.460	21.138	20.987	17.005	10.626	
	MACH-BAR	0.300	0.299	0.300	0.301	0.299	0.297	0.296	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.3	-3.8	-3.5	-4.5	-5.9	-9.5	-13.8	
	OMEGABAR	0.043	0.041	0.028	0.007	0.005	0.006	0.008	
	TURNING	-7.8	-10.0	-11.7	-12.0	-12.0	-9.8	-6.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.112	10.113	10.119	10.128	10.129	10.129	10.128	10.124
WCOR= 1.208	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2533.8	P-STATIC	9.134	9.138	9.143	9.146	9.149	9.150	9.148	
	BETABAR	6.121	7.926	9.342	9.721	9.718	7.927	4.973	
	EPSILON	-1.170	-1.854	-3.227	-4.473	-5.696	-6.842	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	128.766	128.543	128.568	128.926	128.823	128.750	128.805	
	VZ-BAR	128.032	127.312	126.863	127.075	126.975	127.517	128.320	
	V-THET-BAR	13.731	17.725	20.869	21.769	21.746	17.756	11.166	
	MACH-BAR	0.384	0.383	0.383	0.384	0.384	0.384	0.384	
	U-WHEEL	161.605	166.415	176.036	185.658	195.280	204.901	209.712	
	V-BAR-PR	195.599	195.748	200.428	207.383	215.028	226.461	236.403	
	BETABAR-PR	49.113	49.429	50.730	52.210	53.806	55.729	57.126	
	V-THET-B-P	-147.874	-148.690	-155.167	-163.889	-173.534	-187.145	-198.546	
	MACH-BAR-P	0.583	0.583	0.597	0.618	0.641	0.675	0.705	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.208	12.302	12.385	12.319	12.308	12.059	11.853	12.268
ROTOR	T-TOTAL	305.74	305.40	306.10	305.41	304.93	306.15	307.18	305.62
-----	P-STATIC	10.030	10.067	10.164	10.261	10.348	10.423	10.461	
PR = 1.2118	BETABAR	42.784	41.837	42.823	41.328	39.507	42.485	44.841	
TR = 1.0606	EPSILON	-2.886	-2.633	-3.347	-4.377	-5.577	-6.390	-6.818	
EFF-A = 0.9342	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.9336	V-BAR	183.136	184.833	183.757	176.719	172.126	158.376	147.151	
	VZ-BAR	134.408	137.710	134.780	132.701	132.804	116.796	104.339	
	V-THET-BAR	124.393	123.285	124.905	116.701	109.502	106.964	103.763	
	MACH-BAR	0.537	0.543	0.539	0.518	0.504	0.461	0.426	
	U-WHEEL	159.706	164.391	173.761	183.132	192.502	201.873	206.558	
	V-BAR-PR	138.969	143.717	143.369	148.414	156.613	150.500	146.470	
	BETABAR-PR	14.721	16.619	19.925	26.588	32.004	39.098	44.573	
	V-THET-B-P	-35.313	-41.106	-48.856	-66.431	-83.001	-94.909	-102.796	
	MACH-BAR-P	0.408	0.422	0.420	0.435	0.459	0.438	0.424	
	D-FACTOR	0.486	0.458	0.481	0.466	0.483	0.509	0.554	
	TURNING	34.4	32.8	30.8	25.6	21.8	16.6	12.6	
	INCID-R	-8.3	-6.7	-4.5	-3.3	-3.1	-2.9	-2.7	
	DEVIATION	26.6	20.4	11.3	8.9	6.8	7.9	10.7	
	OMEGABAR-P	0.090	0.035	0.042	0.032	0.012	0.137	0.225	
	LOSS PAR	0.030	0.012	0.015	0.012	0.004	0.047	0.072	
	PT-RATIO	1.207	1.216	1.224	1.216	1.215	1.191	1.170	1.2118
	EFF-AD	0.908	0.964	0.956	0.963	0.985	0.820	0.697	0.9342
	EFF-POLY	0.909	0.964	0.956	0.963	0.985	0.823	0.703	0.9336
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.208	12.300	12.385	12.320	12.310	12.063	11.853	12.268
	T-TOTAL	305.74	305.40	306.10	305.43	304.93	306.13	307.18	305.62
	P-STATIC	10.047	10.056	10.112	10.188	10.261	10.339	10.377	
	BETABAR	43.088	41.806	42.310	40.660	38.680	41.812	43.538	
	EPSILON	-0.113	-1.023	-2.437	-4.135	-5.205	-7.043	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	182.353	185.223	186.048	180.068	176.193	162.799	151.723	
	VZ-BAR	133.174	138.067	137.586	136.594	137.585	122.096	109.987	
	V-THET-BAR	124.568	123.470	125.235	117.326	110.115	107.685	104.512	
	MACH-BAR	0.535	0.544	0.546	0.528	0.516	0.474	0.440	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.732	11.972	12.182	12.154	12.191	11.806	11.307	12.052
ROTOR PLUS STATOR	T-TOTAL	305.74	305.40	306.09	305.43	304.93	306.15	307.18	305.62
----------	P-STATIC	10.664	10.666	10.659	10.643	10.618	10.588	10.571	
PR = 1.1904	BETABAR	13.062	12.460	11.618	11.766	11.995	11.216	8.773	
TR = 1.0606	EPSILON	0.450	-0.030	-1.269	-2.522	-3.702	-4.925	-5.489	
EFF-A = 0.8431	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8469	V-BAR	128.539	141.127	151.725	151.146	153.940	137.281	108.396	
	VZ-BAR	125.213	137.804	148.617	147.970	150.579	134.658	107.128	
	V-THET-BAR	29.051	30.443	30.553	30.820	31.993	26.707	16.532	
IGV,ROTOR,STATOR	MACH-BAR	0.372	0.409	0.441	0.440	0.448	0.397	0.311	
----------	EFF-POLY	0.599	0.684	0.760	0.760	0.777	0.522	0.282	
PR = 1.1895	INCID-R	-12.6	-10.8	-8.5	-9.9	-12.8	-12.2	-11.2	
TR = 1.0606	DEVIATION	12.3	11.2	10.7	11.4	12.6	13.2	11.7	
EFF-A = 0.8423	OMEGA-BAR	0.220	0.186	0.089	0.078	0.058	0.149	0.370	
EFF-P = 0.8433	LOSS PAR	0.076	0.052	0.033	0.030	0.024	0.063	0.162	
	D-FACTOR	0.481	0.420	0.380	0.354	0.313	0.375	0.546	
	TURNING	30.0	29.3	30.7	28.9	26.7	30.2	34.8	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 31)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1328	0.1428	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.157	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2530.3	P-STATIC	9.698	9.699	9.701	9.706	9.713	9.722	9.727	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.598	-4.218	-5.770	-7.288	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	84.751	84.714	84.483	84.022	83.325	82.394	81.826	
	VZ-BAR	84.751	84.714	84.483	84.022	83.325	82.394	81.826	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.251	0.250	0.250	0.248	0.246	0.243	0.242	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.113	10.114	10.120	10.128	10.129	10.129	10.129	10.125
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.529	9.530	9.533	9.539	9.546	9.554	9.558	
	BETABAR	7.700	10.007	11.667	12.030	12.077	9.757	6.104	
	EPSILON	-0.000	-0.910	-2.542	-4.159	-5.729	-7.282	-8.118	
	K-BAR	0.930	0.930	0.930	0.930	0.929	0.929	0.930	
	V-BAR	98.831	98.830	98.920	99.126	98.631	97.972	97.574	
	VZ-BAR	97.940	97.323	96.877	96.949	96.448	96.551	97.021	
	V-THET-BAR	13.242	17.172	20.003	20.660	20.636	16.604	10.375	
	MACH-BAR	0.293	0.293	0.293	0.294	0.292	0.290	0.289	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.4	-3.8	-3.5	-4.5	-5.8	-9.5	-13.8	
	OMEGABAR	0.042	0.040	0.028	0.007	0.005	0.005	0.007	
	TURNING	-7.7	-10.0	-11.7	-12.0	-12.1	-9.8	-6.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.113	10.114	10.120	10.128	10.129	10.129	10.129	10.125
WCOR= 1.158	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2530.3	P-STATIC	9.179	9.183	9.188	9.191	9.194	9.195	9.194	
	BETABAR	6.040	7.936	9.352	9.733	9.808	7.930	4.976	
	EPSILON	-1.170	-1.867	-3.286	-4.578	-5.881	-6.827	-6.637	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	125.737	125.527	125.540	125.880	125.756	125.640	125.696	
	VZ-BAR	125.039	124.322	123.872	124.068	123.918	124.436	125.222	
	V-THET-BAR	13.231	17.330	20.400	21.281	21.422	17.334	10.902	
	MACH-BAR	0.375	0.374	0.374	0.375	0.375	0.374	0.374	
	U-WHEEL	161.384	166.188	175.796	185.405	195.013	204.622	209.426	
	V-BAR-PR	193.866	193.945	198.728	205.742	213.284	224.859	234.718	
	BETABAR-PR	49.836	50.132	51.440	52.912	54.478	56.398	57.758	
	V-THET-R-P	-148.153	-148.858	-155.396	-164.123	-173.591	-187.268	-198.524	
	MACH-BAR-P	0.577	0.578	0.592	0.613	0.635	0.670	0.699	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.238	12.357	12.445	12.384	12.373	12.132	11.950	12.334
ROTOR	T-TOTAL	306.72	306.48	307.08	306.44	306.04	307.68	309.21	306.76
	P-STATIC	10.107	10.155	10.262	10.368	10.461	10.528	10.561	
PR = 1.2182	BETABAR	45.983	45.042	45.737	44.369	42.716	46.732	50.638	
TR = 1.0645	EPSILON	-2.886	-2.660	-3.383	-4.425	-5.668	-6.471	-6.418	
EFF-A = 0.9019	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.9017	V-BAR	181.046	183.215	181.887	174.590	169.677	156.641	146.762	
	VZ-BAR	125.805	129.457	126.949	124.803	124.665	107.370	93.079	
	V-THET-BAR	130.196	129.647	130.257	122.088	115.103	114.044	113.470	
	MACH-BAR	0.530	0.537	0.532	0.510	0.495	0.455	0.424	
	U-WHEEL	159.488	164.167	173.524	182.882	192.240	201.598	206.277	
	V-BAR-PR	129.170	133.983	134.129	138.835	146.603	138.557	131.441	
	BETABAR-PR	13.107	14.929	18.820	25.967	31.747	39.202	44.916	
	V-THET-R-P	-29.292	-34.520	-43.268	-60.795	-77.137	-87.554	-92.806	
	MACH-BAR-P	0.378	0.393	0.392	0.406	0.428	0.402	0.379	
	D-FACTOR	0.543	0.516	0.534	0.520	0.497	0.574	0.634	
	TURNING	36.7	35.2	32.6	26.9	22.7	17.2	12.8	
	INCID-R	-7.6	-6.0	-3.8	-2.6	-2.4	-2.2	-2.0	
	DEVIATION	25.0	18.7	10.2	8.3	6.6	8.0	11.1	
	OMEGABAR-P	0.134	0.074	0.073	0.062	0.043	0.180	0.278	
	LOSS PAR	0.046	0.026	0.026	0.022	0.015	0.061	0.088	
	PT-RATIO	1.210	1.222	1.230	1.223	1.221	1.198	1.180	1.2182
	EFF-AD	0.871	0.928	0.928	0.933	0.949	0.782	0.663	0.9019
	EFF-POLY	0.873	0.929	0.929	0.934	0.950	0.787	0.670	0.9017
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.238	12.355	12.445	12.385	12.375	12.136	11.950	12.334
	T-TOTAL	306.72	306.48	307.08	306.47	306.04	307.64	309.21	306.76
	P-STATIC	10.127	10.150	10.219	10.303	10.384	10.453	10.488	
	BETABAR	46.359	45.078	45.300	43.711	41.885	45.585	49.299	
	EPSILON	-0.113	-0.942	-2.539	-3.957	-5.323	-6.945	-7.979	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	180.163	183.386	183.767	177.610	173.355	160.673	150.754	
	VZ-BAR	124.337	129.507	129.261	128.379	129.061	112.450	98.309	
	V-THET-BAR	130.380	129.839	130.621	122.738	115.738	114.759	114.289	
	MACH-BAR	0.527	0.537	0.538	0.520	0.507	0.467	0.436	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.871	12.046	12.280	12.275	12.296	11.921	11.514	12.159
ROTOR PLUS STATOR	T-TOTAL	306.72	306.48	307.07	306.49	306.03	307.63	309.21	306.76
	P-STATIC	10.868	10.871	10.869	10.855	10.833	10.800	10.787	
PR = 1.2009	BETABAR	13.321	12.755	11.923	12.210	12.322	10.844	8.107	
TR = 1.0645	EPSILON	0.450	0.004	-1.109	-2.387	-3.584	-4.840	-5.489	
EFF-A = 0.8322	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8365	V-BAR	123.906	133.393	145.407	145.797	147.842	131.094	107.535	
	VZ-BAR	120.572	130.102	142.270	142.499	144.436	128.751	106.460	
	V-THET-BAR	28.549	29.445	30.041	30.835	31.550	24.672	15.164	
IGV,ROTOR,STATOR	MACH-BAR	0.357	0.386	0.421	0.423	0.429	0.378	0.308	
	EFF-POLY	0.698	0.730	0.822	0.849	0.868	0.646	0.425	
PR = 1.2001	INCID-R	-9.3	-7.6	-5.5	-6.8	-9.6	-8.0	-5.5	
TR = 1.0645	DEVIATION	12.5	11.4	11.0	11.8	13.0	12.8	11.0	
EFF-A = 0.8326	OMEGA-BAR	0.174	0.140	0.074	0.053	0.039	0.128	0.298	
EFF-P = 0.8335	LOSS PAR	0.060	0.050	0.028	0.021	0.016	0.054	0.130	
	D-FACTOR	0.513	0.471	0.419	0.388	0.352	0.431	0.582	
	TURNING	33.0	32.3	33.4	31.5	29.6	34.7	41.2	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 32)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.126	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2535.2	P-STATIC	9.723	9.723	9.725	9.729	9.736	9.744	9.749	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.583	-4.190	-5.735	-7.284	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	82.287	82.252	82.041	81.615	80.969	80.097	79.566	
	VZ-BAR	82.287	82.252	82.041	81.615	80.969	80.097	79.566	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.243	0.243	0.242	0.241	0.239	0.237	0.235	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.114	10.115	10.120	10.129	10.129	10.129	10.129	10.125
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.590	9.591	9.595	9.600	9.606	9.613	9.616	
	BETABAR	7.570	9.974	11.654	12.034	11.935	6.149	2.719	
	EPSILON	-0.000	-0.883	-2.535	-4.127	-5.718	-7.306	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	93.475	93.481	93.574	93.818	93.340	92.738	92.419	
	VZ-BAR	92.661	92.065	91.645	91.756	91.320	92.198	92.315	
	V-THET-BAR	12.313	16.190	18.901	19.561	19.303	9.933	4.384	
	MACH-BAR	0.277	0.277	0.277	0.278	0.276	0.274	0.274	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.5	-3.8	-3.5	-4.5	-5.9	-13.1	-17.2	
	OMEGABAR	0.042	0.040	0.028	0.007	0.005	0.005	0.006	
	TURNING	-7.6	-10.0	-11.7	-12.0	-11.9	-6.1	-2.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.114	10.115	10.120	10.129	10.129	10.129	10.129	10.125
WCOR= 1.127	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2535.2	P-STATIC	9.280	9.283	9.288	9.290	9.292	9.292	9.290	
	BETABAR	5.953	7.939	9.371	9.777	9.680	4.981	2.222	
	EPSILON	-1.170	-1.788	-3.165	-4.389	-5.570	-6.537	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	118.631	118.421	118.485	118.814	118.734	118.741	118.826	
	VZ-BAR	117.991	117.284	116.854	117.089	117.042	118.287	118.736	
	V-THET-BAR	12.303	16.356	19.285	20.176	19.965	10.309	4.607	
	MACH-BAR	0.353	0.352	0.352	0.353	0.353	0.353	0.353	
	U-WHEEL	161.691	166.504	176.131	185.758	195.384	205.011	209.825	
	V-BAR-PR	190.365	190.526	195.598	202.799	210.883	227.819	237.092	
	BETABAR-PR	51.697	52.006	53.310	54.734	56.287	58.718	59.947	
	V-THET-B-P	-149.388	-150.188	-156.846	-165.581	-175.420	-194.702	-205.218	
	MACH-BAR-P	0.566	0.567	0.582	0.603	0.627	0.678	0.705	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.269	12.411	12.504	12.450	12.435	12.207	12.046	12.395
ROTOR	T-TOTAL	307.18	307.03	307.42	306.87	306.63	307.85	309.78	307.20
-----	P-STATIC	10.223	10.276	10.386	10.496	10.593	10.670	10.700	
PR = 1.2242	BETABAR	48.176	47.058	47.100	45.933	44.382	44.857	49.641	
TR = 1.0660	EPSILON	-2.886	-2.799	-3.249	-4.278	-5.498	-6.265	-6.418	
EFF-A = 0.9038	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.9035	V-BAR	177.037	179.985	178.583	171.291	166.088	152.755	143.911	
	VZ-BAR	118.057	122.618	121.566	119.132	118.700	108.284	93.194	
	V-THET-BAR	131.927	131.754	130.819	123.077	116.169	107.743	109.659	
	MACH-BAR	0.517	0.526	0.522	0.500	0.484	0.443	0.415	
	U-WHEEL	159.792	164.479	173.855	183.230	192.606	201.982	206.669	
	V-BAR-PR	121.301	126.912	128.971	133.469	141.193	143.551	134.521	
	BETABAR-PR	13.280	14.940	19.493	26.786	32.775	41.033	46.149	
	V-THET-B-P	-27.865	-32.725	-43.036	-60.153	-76.437	-94.239	-97.010	
	MACH-BAR-P	0.354	0.371	0.377	0.389	0.411	0.416	0.388	
	D-FACTOR	0.581	0.550	0.556	0.543	0.522	0.559	0.630	
	TURNING	38.4	37.1	33.8	27.9	23.5	17.7	13.8	
	INCID-M	-5.7	-4.1	-2.0	-0.8	-0.6	0.1	0.2	
	DEVIATION	25.1	18.7	10.9	9.1	7.6	9.8	12.3	
	OMEGABAR-P	0.153	0.087	0.071	0.062	0.051	0.162	0.269	
	LOSS PAR	0.052	0.030	0.025	0.022	0.018	0.054	0.084	
	PT-RATIO	1.213	1.227	1.236	1.229	1.228	1.205	1.189	1.2242
	EFF-AD	0.860	0.920	0.933	0.937	0.943	0.802	0.678	0.9034
	EFF-POLY	0.863	0.921	0.934	0.937	0.944	0.807	0.685	0.9035
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.269	12.409	12.505	12.450	12.437	12.211	12.046	12.395
	T-TOTAL	307.18	307.03	307.42	306.89	306.62	307.83	309.78	307.20
	P-STATIC	10.242	10.268	10.346	10.435	10.520	10.593	10.625	
	BETABAR	48.588	47.076	46.659	45.238	43.571	43.753	48.240	
	EPSILON	-0.113	-0.797	-2.532	-4.122	-5.416	-7.045	-7.979	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	176.158	180.213	180.422	174.176	169.615	156.839	148.069	
	VZ-BAR	116.523	122.732	123.831	122.647	122.887	113.291	98.615	
	V-THET-BAR	132.113	131.958	131.217	123.671	116.908	108.459	110.451	
	MACH-BAR	0.514	0.527	0.527	0.509	0.495	0.455	0.427	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.935	12.101	12.319	12.313	12.340	11.989	11.602	12.206
ROTOR PLUS STATOR	T-TOTAL	307.18	307.03	307.42	306.89	306.62	307.86	309.78	307.20
----------	P-STATIC	10.996	10.999	10.997	10.983	10.962	10.930	10.912	
PR = 1.2055	BETABAR	15.456	13.947	12.165	12.161	12.563	11.089	8.495	
TR = 1.0660	EPSILON	0.450	-0.087	-1.303	-2.574	-3.793	-4.994	-5.489	
EFF-A = 0.8304	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8348	V-BAR	119.524	128.836	140.354	140.783	143.125	126.986	103.961	
	VZ-BAR	115.201	125.038	137.202	137.624	139.699	124.615	102.821	
	V-THET-BAR	31.853	31.040	29.576	29.656	31.132	24.425	15.357	
IGV,ROTOR,STATOR	MACH-BAR	0.344	0.372	0.406	0.407	0.415	0.366	0.297	
----------	FFF-POLY	0.719	0.731	0.802	0.821	0.839	0.626	0.415	
PR = 1.2047	INCID-M	-7.1	-5.6	-4.2	-5.3	-7.9	-9.9	-6.5	
TR = 1.0660	DEVIATION	14.7	12.6	11.3	11.8	13.2	13.1	11.4	
EFF-A = 0.8306	OMEGA-BAR	0.165	0.144	0.086	0.068	0.050	0.137	0.312	
EFF-P = 0.8320	LOSS PAR	0.056	0.051	0.032	0.026	0.020	0.058	0.136	
	D-FACTOR	0.523	0.489	0.438	0.409	0.369	0.425	0.586	
	TURNING	33.1	33.1	34.5	33.1	31.0	32.7	39.7	

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Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 33)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.059	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2543.0	P-STATIC	9.765	9.765	9.767	9.771	9.776	9.784	9.788	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.598	-4.249	-5.788	-7.288	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	77.876	77.843	77.645	77.242	76.634	75.818	75.318	
	VZ-BAR	77.876	77.843	77.645	77.242	76.634	75.818	75.318	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.230	0.230	0.229	0.228	0.226	0.224	0.222	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.116	10.117	10.121	10.129	10.129	10.129	10.129	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.632	9.633	9.636	9.641	9.647	9.653	9.656	
	BETABAR	7.333	9.856	11.638	12.064	12.053	9.843	6.089	
	EPSILON	-0.000	-0.910	-2.542	-4.166	-5.733	-7.282	-8.118	
	K-BAR	0.930	0.930	0.930	0.930	0.929	0.929	0.930	
	V-BAR	89.744	89.761	89.804	90.012	89.564	88.979	88.667	
	VZ-BAR	89.010	88.433	87.958	88.043	87.590	87.666	88.167	
	V-THET-BAR	11.454	15.364	18.116	18.720	18.702	15.210	9.405	
	MACH-BAR	0.266	0.266	0.266	0.266	0.265	0.263	0.262	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.7	-3.9	-3.5	-4.5	-5.8	-9.4	-13.8	
	OMEGABAR	0.041	0.034	0.028	0.008	0.006	0.006	0.006	
	TURNING	-7.3	-9.9	-11.6	-12.0	-12.1	-9.8	-6.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.116	10.117	10.121	10.129	10.129	10.129	10.129	10.126
WCOR= 1.060	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2543.0	P-STATIC	9.350	9.353	9.356	9.359	9.361	9.362	9.361	
	BETABAR	5.785	7.863	9.377	9.760	9.841	8.041	4.990	
	EPSILON	-1.170	-1.811	-3.197	-4.627	-5.817	-6.765	-6.637	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	113.554	113.375	113.399	113.722	113.601	113.531	113.622	
	VZ-BAR	112.975	112.307	111.883	112.076	111.930	112.412	113.191	
	V-THET-BAR	11.445	15.510	18.476	19.278	19.417	15.880	9.882	
	MACH-BAR	0.337	0.337	0.337	0.338	0.338	0.337	0.336	
	U-WHEEL	162.192	167.020	176.677	186.333	195.990	205.646	210.475	
	V-BAR-PR	188.383	188.595	193.767	201.169	209.061	220.564	230.325	
	BETABAR-PR	53.151	53.452	54.730	56.142	57.629	59.357	60.565	
	V-THET-B-P	-150.747	-151.510	-156.200	-167.055	-176.573	-189.766	-200.592	
	MACH-BAR-P	0.560	0.560	0.576	0.598	0.621	0.655	0.684	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.289	12.319	12.500	12.395	12.352	12.244	12.056	12.360
ROTOR	T-TOTAL	307.71	307.37	307.57	307.10	306.95	308.06	310.12	307.44
PR = 1.2206	P-STATIC	10.319	10.372	10.491	10.592	10.682	10.760	10.792	
TR = 1.0669	BETABAR	50.547	50.396	48.732	48.422	47.811	49.654	56.644	
EFF-A = 0.8786	EPSILON	-2.665	-2.421	-3.193	-4.442	-5.577	-6.406	-6.418	
EFF-P = 0.8797	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	173.491	172.109	173.670	164.628	158.334	149.739	139.320	
	VZ-BAR	110.244	109.714	114.549	109.252	106.334	96.946	76.604	
	V-THET-BAR	133.961	132.605	130.536	123.151	117.314	114.107	116.370	
	MACH-BAR	0.506	0.502	0.506	0.479	0.460	0.433	0.401	
	U-WHEEL	160.267	164.989	174.394	183.798	193.203	202.607	207.310	
	V-BAR-PR	113.343	114.399	122.667	124.971	130.641	131.279	118.904	
	BETABAR-PR	13.430	16.442	20.946	29.033	35.513	42.400	49.891	
	V-THET-B-P	-26.328	-32.383	-43.857	-60.647	-75.888	-88.500	-90.940	
	MACH-BAR-P	0.330	0.334	0.358	0.364	0.380	0.380	0.342	
	D-FACTOR	0.624	0.615	0.585	0.584	0.571	0.601	0.689	
	TURNING	39.7	37.0	33.8	27.1	22.1	17.0	10.7	
	INCID-M	-4.2	-2.7	-0.5	0.6	0.7	0.7	0.8	
	DEVIATION	25.3	20.2	12.3	11.4	10.3	11.2	16.0	
	OMEGABAR-P	0.178	0.147	0.083	0.094	0.095	0.168	0.293	
	LOSS PAR	0.061	0.051	0.029	0.033	0.033	0.055	0.085	
	PT-RATIO	1.215	1.218	1.235	1.224	1.219	1.209	1.190	1.2206
	EFF-AD	0.844	0.869	0.924	0.905	0.896	0.807	0.670	0.8786
	EFF-POLY	0.847	0.872	0.925	0.906	0.898	0.811	0.678	0.8797
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.289	12.317	12.498	12.399	12.353	12.248	12.056	12.360
	T-TOTAL	307.71	307.37	307.57	307.12	306.94	308.01	310.12	307.44
	P-STATIC	10.326	10.360	10.453	10.541	10.627	10.704	10.737	
	BETABAR	50.775	50.311	48.300	47.749	47.079	48.662	55.357	
	EPSILON	-0.113	-1.250	-2.452	-3.982	-5.416	-6.903	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	173.171	172.612	175.354	167.190	161.092	152.875	142.468	
	VZ-BAR	109.508	110.234	116.651	112.414	109.701	100.976	80.988	
	V-THET-BAR	134.151	132.827	130.925	123.756	117.967	114.775	117.210	
	MACH-BAR	0.505	0.503	0.512	0.487	0.469	0.443	0.410	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.994	12.054	12.335	12.272	12.204	12.022	11.742	12.174
ROTOR PLUS STATOR	T-TOTAL	307.71	307.38	307.57	307.13	306.94	307.97	310.12	307.44
	P-STATIC	11.064	11.065	11.066	11.053	11.033	11.007	10.991	
PR = 1.2023	BETABAR	15.679	14.079	12.682	12.325	12.482	11.244	8.961	
TR = 1.0669	EPSILON	0.450	-0.059	-1.220	-2.425	-3.626	-4.769	-5.489	
EFF-A = 0.8081	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8131	V-BAR	116.732	122.108	137.380	134.799	132.352	124.069	107.939	
	VZ-BAR	114.314	118.440	134.028	131.692	129.224	121.687	106.622	
	V-THET-BAR	32.087	29.694	30.159	28.773	28.604	24.193	16.812	
IGV,ROTOR,STATOR	MACH-BAR	0.342	0.352	0.397	0.389	0.382	0.357	0.309	
	EFF-POLY	0.738	0.751	0.812	0.819	0.755	0.604	0.469	
PR = 1.2016	INCID-M	-4.9	-2.3	-2.5	-2.8	-4.4	-5.0	0.6	
TR = 1.0669	DEVIATION	14.9	12.8	11.8	12.0	13.1	13.2	11.9	
EFF-A = 0.8080	OMEGA-BAR	0.150	0.135	0.080	0.068	0.086	0.147	0.238	
EFF-P = 0.8105	LOSS PAR	0.051	0.047	0.030	0.027	0.035	0.062	0.104	
	D-FACTOR	0.523	0.510	0.437	0.423	0.412	0.450	0.558	
	TURNING	35.1	36.2	35.6	35.4	34.6	37.4	46.4	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 34)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
NCOR= 1.004	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2532.0	P-STATIC	9.810	9.810	9.812	9.815	9.820	9.826	9.830	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.932	-2.613	-4.233	-5.785	-7.284	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	72.664	72.835	72.651	72.280	71.715	70.959	70.490	
	VZ-BAR	72.664	72.835	72.651	72.280	71.715	70.959	70.490	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.215	0.215	0.214	0.213	0.212	0.209	0.208	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.118	10.119	10.122	10.129	10.129	10.129	10.130	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.685	9.686	9.689	9.693	9.699	9.705	9.708	
	BETABAR	7.127	9.767	11.558	12.003	12.137	9.916	5.943	
	EPSILON	-0.000	-0.884	-2.535	-4.148	-5.706	-7.260	-8.118	
	K-BAR	0.930	0.930	0.930	0.930	0.929	0.929	0.930	
	V-BAR	84.770	84.799	84.802	84.979	84.506	83.917	83.658	
	VZ-BAR	84.115	83.567	83.082	83.121	82.617	82.660	83.209	
	V-THET-BAR	10.517	14.385	16.991	17.672	17.767	14.451	8.662	
	MACH-BAR	0.251	0.251	0.251	0.251	0.250	0.248	0.247	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.0	-4.0	-3.6	-4.5	-5.7	-9.3	-14.0	
	OMEGABAR	0.042	0.039	0.029	0.008	0.007	0.007	0.006	
	TURNING	-7.1	-9.8	-11.6	-12.0	-12.1	-9.9	-5.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.116	10.119	10.122	10.129	10.129	10.129	10.130	10.126
NCOR= 1.004	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2532.0	P-STATIC	9.433	9.435	9.438	9.442	9.447	9.451	9.450	
	BETABAR	5.629	7.802	9.319	9.776	9.944	8.141	4.895	
	EPSILON	-1.170	-1.939	-3.891	-5.785	-7.372	-7.905	-6.637	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	107.145	107.025	107.024	107.211	106.834	106.532	106.665	
	VZ-BAR	106.628	106.032	105.611	105.654	105.229	105.456	106.276	
	V-THET-BAR	10.509	14.529	17.331	18.204	18.448	15.086	9.102	
	MACH-BAR	0.316	0.318	0.318	0.318	0.317	0.316	0.316	
	U-WHEEL	161.491	166.298	175.913	185.528	195.142	204.757	209.565	
	V-BAR-PR	184.638	185.140	190.532	197.890	205.656	217.018	226.891	
	BETABAR-PR	54.769	55.060	56.337	57.730	59.224	60.925	62.070	
	V-THET-B-P	-150.982	-151.769	-158.562	-167.324	-176.694	-189.671	-200.462	
	MACH-BAR-P	0.548	0.549	0.565	0.587	0.610	0.644	0.673	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.289	12.540	12.654	12.493	12.381	12.127	12.015	12.450
ROTOR	T-TOTAL	307.91	307.60	307.72	306.77	307.17	308.83	310.12	307.56
	P-STATIC	10.462	10.521	10.644	10.743	10.826	10.900	10.939	
PR = 1.2295	BETABAR	53.954	50.266	49.347	48.619	50.701	58.765	64.675	
TR = 1.0673	EPSILON	-2.685	-2.327	-3.484	-5.302	-6.765	-7.048	-6.416	
EFF-A = 0.9065	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.9062	V-BAR	166.734	173.855	172.671	161.250	152.396	136.435	128.377	
	VZ-BAR	96.112	111.136	112.490	106.598	96.525	70.782	54.914	
	V-THET-BAR	134.612	133.692	131.601	120.989	117.924	116.575	116.039	
	MACH-BAR	0.485	0.507	0.503	0.469	0.442	0.393	0.369	
	U-WHEEL	159.594	164.275	173.639	183.003	192.367	201.731	206.413	
	V-BAR-PR	101.193	115.266	120.309	123.340	121.910	110.830	105.750	
	BETABAR-PR	14.176	15.384	20.757	30.188	37.645	50.303	58.716	
	V-THET-B-P	-24.782	-30.584	-42.638	-62.014	-74.444	-85.157	-96.374	
	MACH-BAR-P	0.294	0.336	0.351	0.359	0.354	0.319	0.304	
	D-FACTOR	0.686	0.607	0.595	0.585	0.613	0.700	0.745	
	TURNING	40.6	39.7	35.6	27.5	21.6	10.6	3.4	
	INCID-M	-2.6	-1.1	1.1	2.2	2.3	2.3	2.3	
	DEVIATION	26.0	19.1	12.2	12.5	12.5	19.1	24.9	
	OMEGABAR-P	0.197	0.073	0.033	0.042	0.097	0.239	0.313	
	LOSS PAR	0.067	0.025	0.012	0.015	0.032	0.067	0.073	
	PT-RATIO	1.215	1.239	1.250	1.233	1.222	1.197	1.186	1.2295
	EFF-AD	0.835	0.938	0.971	0.958	0.896	0.737	0.657	0.9065
	EFF-POLY	0.838	0.939	0.971	0.958	0.898	0.743	0.664	0.9062
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.289	12.535	12.658	12.497	12.387	12.132	12.015	12.450
	T-TOTAL	307.91	307.60	307.75	306.78	307.14	308.79	310.12	307.56
	P-STATIC	10.465	10.516	10.620	10.712	10.779	10.838	10.874	
	BETABAR	54.127	50.352	49.160	48.243	49.846	56.816	61.999	
	EPSILON	-0.113	-1.347	-3.040	-4.246	-5.388	-6.822	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	166.664	173.903	173.883	162.957	154.988	140.230	132.372	
	VZ-BAR	97.628	110.964	113.711	108.524	99.948	76.775	62.146	
	V-THET-BAR	135.002	133.892	131.549	121.562	118.449	117.299	116.877	
	MACH-BAR	0.485	0.507	0.507	0.474	0.450	0.404	0.380	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.018	12.242	12.371	12.265	12.196	11.953	11.843	12.262
ROTOR PLUS STATOR	T-TOTAL	307.91	307.61	307.74	306.84	307.00	308.54	310.12	307.56
	P-STATIC	11.276	11.280	11.277	11.265	11.250	11.231	11.223	
PR = 1.2050	BETABAR	15.458	14.521	13.053	12.756	12.813	11.961	10.162	
TR = 1.0673	EPSILON	0.450	-0.072	-0.686	-1.682	-2.647	-4.100	-5.489	
EFF-A = 0.8132	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8181	V-BAR	105.645	119.505	127.656	121.639	118.598	104.521	97.511	
	VZ-BAR	101.824	115.689	123.772	118.637	115.645	102.250	95.981	
	V-THET-BAR	28.158	29.954	28.696	26.857	26.301	21.666	17.205	
IGV,ROTOR,STATOR	MACH-BAR	0.303	0.344	0.366	0.351	0.342	0.299	0.278	
	EFF-POLY	0.769	0.747	0.723	0.721	0.754	0.748	0.685	
PR = 1.2044	INCID-M	-1.5	-2.3	-1.7	-2.3	-1.7	3.2	7.2	
TR = 1.0673	DEVIATION	14.7	13.2	12.2	12.4	13.4	13.9	13.1	
EFF-A = 0.8137	OMEGA-BAR	0.149	0.145	0.141	0.130	0.118	0.138	0.151	
EFF-P = 0.8157	LOSS PAR	0.051	0.051	0.052	0.050	0.048	0.058	0.066	
	D-FACTOR	0.593	0.530	0.497	0.491	0.488	0.559	0.601	
	TURNING	36.7	35.8	36.1	35.5	37.0	44.9	51.8	

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Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 35)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.987	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2535.4	P-STATIC	9.821	9.821	9.823	9.826	9.831	9.836	9.842	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.006	-0.924	-2.615	-4.227	-5.761	-7.286	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	71.596	71.569	71.372	70.992	70.414	69.632	69.155	
	VZ-BAR	71.596	71.569	71.372	70.992	70.414	69.632	69.155	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.211	0.211	0.211	0.209	0.208	0.205	0.204	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.116	10.119	10.122	10.129	10.129	10.129	10.130	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.720	9.720	9.723	9.727	9.732	9.737	9.739	
	BETABAR	6.977	9.708	11.524	11.978	12.140	9.920	5.953	
	EPSILON	-0.000	-0.881	-2.559	-4.135	-5.710	-7.280	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	81.306	81.332	81.342	81.584	81.142	80.605	80.399	
	VZ-BAR	80.704	80.164	79.702	79.808	79.327	79.397	79.966	
	V-THET-BAR	9.876	13.714	16.250	16.932	17.064	13.886	8.338	
	MACH-BAR	0.240	0.240	0.240	0.241	0.240	0.238	0.238	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.1	-4.1	-3.6	-4.5	-5.7	-9.3	-14.0	
	OMEGABAR	0.042	0.039	0.029	0.009	0.008	0.008	0.006	
	TURNING	-7.0	-9.7	-11.5	-12.0	-12.1	-9.9	-6.6	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.118	10.119	10.122	10.129	10.129	10.129	10.130	10.126
WCOR= 0.987	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2535.4	P-STATIC	9.489	9.492	9.495	9.498	9.501	9.503	9.502	
	BETABAR	5.519	7.769	9.311	9.779	9.958	8.151	4.909	
	EPSILON	-1.170	-1.829	-3.262	-4.756	-6.326	-7.316	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	102.609	102.462	102.417	102.684	102.456	102.247	102.376	
	VZ-BAR	102.133	101.518	101.067	101.192	100.913	101.211	102.006	
	V-THET-BAR	9.868	13.849	16.571	17.441	17.718	14.496	8.761	
	MACH-BAR	0.304	0.304	0.304	0.304	0.304	0.303	0.304	
	U-WHEEL	161.705	166.518	176.146	185.773	195.401	205.028	209.842	
	V-BAR-PR	182.991	183.341	188.889	196.408	204.340	215.747	225.472	
	BETABAR-PR	56.073	56.376	57.651	58.987	60.405	62.021	63.103	
	V-THET-B-P	-151.837	-152.669	-159.575	-168.332	-177.683	-190.532	-201.081	
	MACH-BAR-P	0.543	0.544	0.560	0.582	0.606	0.640	0.668	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.286	12.392	12.489	12.471	12.434	12.200	11.995	12.399
ROTOR	T-TOTAL	307.96	308.00	308.17	307.24	307.20	308.85	310.09	307.86
	P-STATIC	10.416	10.471	10.596	10.707	10.799	10.880	10.919	
PR = 1.2244	BETABAR	52.653	52.450	51.807	48.969	48.690	55.532	63.915	
TR = 1.0684	EPSILON,	-2.886	-2.622	-3.409	-4.765	-6.145	-6.817	-6.416	
EFF-A = 0.8740	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.8749	V-BAR	168.987	170.484	168.535	162.234	156.074	141.306	128.501	
	VZ-BAR	102.515	103.902	104.206	106.500	103.032	80.007	56.503	
	V-THET-BAR	134.341	135.163	132.457	122.382	117.229	116.412	115.412	
	MACH-BAR	0.492	0.496	0.490	0.472	0.453	0.408	0.369	
	U-WHEEL	155.805	164.493	173.869	183.245	192.622	201.998	206.686	
	V-BAR-PR	105.630	107.965	112.147	122.673	127.679	117.245	107.348	
	BETABAR-PR	13.950	15.762	21.667	29.743	36.197	46.970	58.241	
	V-THET-B-P	-25.464	-29.329	-41.412	-60.864	-75.392	-85.586	-91.274	
	MACH-BAR-P	0.307	0.314	0.326	0.357	0.371	0.338	0.348	
	D-FACTOR	0.659	0.647	0.638	0.588	0.580	0.667	0.734	
	TURNING	42.1	40.6	36.0	29.2	24.2	15.1	4.9	
	INCID-M	-1.3	0.2	2.4	3.4	3.5	3.4	3.3	
	DEVIATION	25.6	19.5	13.1	12.1	11.0	15.8	24.4	
	OMEGABAR-P	0.205	0.163	0.126	0.077	0.082	0.222	0.321	
	LOSS PAR	0.070	0.056	0.045	0.027	0.028	0.066	0.076	
	PT-RATIO	1.215	1.225	1.234	1.231	1.228	1.204	1.184	1.2244
	EFF-AD	0.832	0.867	0.892	0.926	0.914	0.762	0.651	0.8740
	EFF-POLY	0.836	0.870	0.894	0.927	0.916	0.767	0.659	0.8749
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.289	12.390	12.468	12.471	12.437	12.205	11.995	12.399
	T-TOTAL	307.96	307.99	308.16	307.26	307.18	308.81	310.09	307.86
	P-STATIC	10.420	10.459	10.560	10.664	10.755	10.835	10.874	
	BETABAR	52.853	52.340	51.347	48.469	48.022	54.474	62.313	
	EPSILON	-0.113	-1.098	-2.956	-4.304	-5.369	-6.776	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	168.777	170.960	170.194	164.341	158.438	144.028	131.277	
	VZ-BAR	101.918	104.464	106.301	108.459	105.972	83.718	60.997	
	V-THET-BAR	134.530	135.356	132.912	123.026	117.779	117.147	116.245	
	MACH-BAR	0.491	0.498	0.495	0.478	0.460	0.416	0.377	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.042	12.247	12.380	12.275	12.196	11.968	11.635	12.207
ROTOR PLUS STATOR	T-TOTAL	307.96	307.99	308.17	307.24	307.15	308.70	310.09	307.86
	P-STATIC	11.318	11.320	11.314	11.301	11.284	11.266	11.258	
PR = 1.2055	BETABAR	15.447	13.742	13.152	12.691	12.582	11.803	10.715	
TR = 1.0684	EPSILON	0.450	-0.153	-1.536	-2.709	-3.493	-4.530	-5.489	
EFF-A = 0.8023	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8074	V-BAR	104.200	117.313	125.414	120.009	116.428	102.959	76.398	
	VZ-BAR	100.435	113.956	122.125	116.984	113.632	100.780	75.066	
	V-THET-BAR	27.754	27.856	26.535	26.773	25.363	21.069	14.205	
IGV,ROTOR,STATOR	MACH-BAR	0.299	0.337	0.361	0.346	0.335	0.295	0.217	
	EFF-POLY	0.802	0.871	0.888	0.786	0.712	0.679	0.531	
PR = 1.2048	INCID-M	-2.8	-0.3	0.5	-2.0	-3.5	0.8	7.5	
TR = 1.0684	DEVIATION	14.7	12.4	12.3	12.5	13.2	13.8	13.7	
EFF-A = 0.8026	OMEGA-BAR	0.132	0.074	0.056	0.109	0.143	0.173	0.321	
EFF-P = 0.8052	LOSS PAR	0.045	0.026	0.021	0.042	0.058	0.073	0.139	
	D-FACTOR	0.607	0.543	0.498	0.505	0.511	0.581	0.766	
	TURNING	37.4	38.6	38.2	35.6	35.4	42.7	51.6	

Table B-3. Nominal Scaled Stage Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 36)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	S-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.964	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2533.2	S-STATIC	9.836	9.838	9.838	9.840	9.845	9.851	9.855	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.932	-2.613	-4.233	-5.785	-7.284	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	69.646	69.820	69.643	69.288	68.747	68.021	67.575	
	VZ-BAR	69.848	69.820	69.643	69.288	68.747	68.021	67.575	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.206	0.206	0.205	0.204	0.203	0.201	0.199	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	S-TOTAL	10.119	10.120	10.123	10.129	10.129	10.129	10.130	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	S-STATIC	9.739	9.739	9.742	9.746	9.751	9.756	9.759	
	BETABAR	6.888	9.638	11.544	11.992	12.121	9.890	5.922	
	EPSILON	-0.000	-0.884	-2.535	-4.148	-5.706	-7.260	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	79.370	79.422	79.411	79.597	79.123	78.557	78.353	
	VZ-BAR	78.797	78.296	77.805	77.860	77.359	77.386	77.935	
	V-THET-BAR	9.519	15.296	15.892	16.538	16.614	13.493	8.084	
	MACH-BAR	0.234	0.235	0.235	0.235	0.234	0.232	0.231	
	INCID-P	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.2	-4.1	-3.6	-4.5	-5.8	-9.3	-14.0	
	OMEGABAR	0.042	0.039	0.030	0.009	0.008	0.008	0.006	
	TURNING	-6.9	-9.6	-11.5	-12.0	-12.1	-9.9	-5.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	S-TOTAL	10.119	10.120	10.123	10.129	10.129	10.129	10.130	10.126
WCOR= 0.964	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2533.2	S-STATIC	9.519	9.521	9.524	9.527	9.532	9.536	9.535	
	BETABAR	5.453	7.720	9.327	9.788	9.951	8.142	4.889	
	EPSILON	-1.170	-1.854	-3.852	-6.008	-7.890	-8.789	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	100.695	99.999	100.021	100.232	99.831	99.455	99.662	
	VZ-BAR	99.642	99.090	98.698	98.773	98.329	98.450	99.300	
	V-THET-BAR	9.511	13.432	16.210	17.039	17.251	14.086	8.494	
	MACH-BAR	0.297	0.296	0.296	0.297	0.296	0.295	0.295	
	U-WHEEL	161.564	166.374	175.993	185.612	195.231	204.850	209.660	
	V-BAR-IR	181.793	182.236	187.809	195.380	203.337	214.672	224.339	
	BETABAR-IR	56.763	57.061	58.295	59.632	61.080	62.701	63.728	
	V-THET-R-I	-152.053	-152.941	-159.782	-168.573	-177.980	-190.765	-201.166	
	MACH-BAR-P	0.539	0.540	0.557	0.579	0.603	0.636	0.665	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	S-TOTAL	12.289	12.531	12.747	12.610	12.453	12.148	11.955	12.523
ROTOR	T-TOTAL	308.05	307.75	307.82	307.12	307.19	309.11	310.07	307.70
-----	S-STATIC	10.541	10.600	10.722	10.823	10.904	10.976	11.013	
PR = 1.2367	BETABAR	55.782	51.767	49.038	48.595	50.335	60.895	73.375	
TR = 1.0678	EPSILON	-2.885	-2.243	-3.497	-5.449	-7.000	-7.201	-6.418	
EFF-A = 0.9262	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.9255	V-BAR	162.913	169.889	172.675	162.344	151.585	133.144	120.119	
	VZ-BAR	91.707	105.280	113.197	107.370	96.762	64.795	34.366	
	V-THET-BAR	134.649	133.325	130.395	121.767	116.673	116.254	115.098	
	MACH-BAR	0.473	0.495	0.503	0.472	0.440	0.383	0.344	
	U-WHEEL	159.666	164.350	173.718	183.087	192.455	201.823	206.507	
	V-BAR-IR	95.058	109.758	121.211	123.660	122.920	107.415	97.655	
	BETABAR-IR	15.259	16.415	20.941	29.730	38.075	52.904	69.396	
	V-THET-R-P	-25.017	-31.025	-43.324	-61.319	-75.782	-85.569	-91.409	
	MACH-BAR-I	0.276	0.320	0.353	0.360	0.357	0.309	0.280	
	D-FACTOR	0.717	0.633	0.586	0.583	0.605	0.717	0.776	
	TURNING	41.5	40.6	37.4	29.9	23.0	9.8	-5.7	
	INCID-P	-0.6	0.9	3.0	4.1	4.2	4.1	3.9	
	DEVIATION	27.1	20.2	12.3	12.1	12.9	21.7	35.5	
	OMEGABAR-P	0.213	0.089	0.002	0.018	0.074	0.247	0.335	
	LOSS BAR	0.072	0.031	0.001	0.006	0.025	0.066	0.053	
	PI-RATIO	1.214	1.238	1.259	1.245	1.229	1.199	1.180	1.2367
	EFF-AD	0.628	0.927	0.998	0.983	0.922	0.734	0.638	0.9262
	EFF-POLY	0.832	0.929	0.997	0.982	0.923	0.740	0.646	0.9255
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	S-TOTAL	12.289	12.525	12.748	12.616	12.463	12.160	11.955	12.523
	T-TOTAL	308.05	307.75	307.84	307.15	307.13	309.04	310.07	307.70
	S-STATIC	10.547	10.593	10.701	10.796	10.868	10.934	10.974	
	BETABAR	55.992	51.778	48.886	48.302	49.563	59.228	70.916	
	EPSILON	-0.113	-1.423	-3.040	-4.256	-5.304	-6.536	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	162.661	169.994	173.719	163.922	153.849	136.197	122.671	
	VZ-BAR	90.978	105.183	114.230	109.042	99.789	69.726	40.107	
	V-THET-BAR	134.839	133.531	130.881	122.393	117.097	116.913	115.929	
	MACH-BAR	0.472	0.495	0.506	0.477	0.447	0.392	0.352	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	S-TOTAL	12.042	12.248	12.382	12.269	12.172	12.001	11.635	12.209
ROTOR PLUS STATOR	T-TOTAL	308.05	307.75	307.84	307.24	307.00	308.63	310.07	307.70
----------	S-STATIC	11.291	11.294	11.292	11.280	11.266	11.250	11.240	
PR = 1.2057	BETABAR	15.070	14.953	13.391	13.296	13.013	12.247	11.250	
TR = 1.0678	EPSILON	0.450	-0.123	-0.918	-1.510	-2.131	-3.512	-5.489	
EFF-A = 0.8098	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8148	V-BAR	106.240	118.953	126.756	121.016	116.098	106.462	78.174	
	VZ-BAR	102.586	114.926	123.309	117.772	113.116	104.037	76.672	
	V-THET-BAR	27.622	30.689	29.355	27.832	26.142	22.593	15.250	
IGV,ROTOR,STATOR	MACH-BAR	0.305	0.342	0.365	0.349	0.334	0.305	0.223	
----------	EFF-POLY	0.769	0.740	0.648	0.603	0.617	0.769	0.468	
PR = 1.2050	INCID-R	0.3	-0.9	-1.9	-2.2	-1.9	5.6	16.1	
TR = 1.0678	DEVIATION	14.3	13.6	12.5	12.9	13.6	14.2	14.2	
EFF-A = 0.8102	OMEGA-BAR	0.	0.143	.179	0.190	0.182	0.129	0.326	
EFF-P = 0.8126	LOSS BAR	0.040	0.050	0.066	0.074	0.073	0.054	0.141	
	D-FACTOR	0.580	0.520	0.494	0.499	0.501	0.535	0.731	
	TURNING	40.9	36.8	35.5	35.0	36.5	47.0	59.7	

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Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units

(Data Point No. 37)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.539	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3585.1	P-STATIC	9.317	9.318	9.323	9.332	9.345	9.362	9.373	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.638	-4.252	-5.796	-7.295	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	117.002	116.951	116.613	115.951	114.952	113.634	112.837	
	VZ-BAR	117.002	116.951	116.613	115.951	114.952	113.634	112.837	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.348	0.348	0.347	0.345	0.342	0.338	0.335	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.094	10.095	10.103	10.119	10.119	10.118	10.115	10.111
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.017	9.019	9.026	9.037	9.049	9.064	9.071	
	BETABAR	7.750	10.202	11.802	12.309	12.142	9.897	5.018	
	EPSILON	-0.000	-0.910	-2.573	-4.198	-5.759	-7.291	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	135.516	135.467	135.424	135.681	134.856	133.837	133.199	
	VZ-BAR	134.278	133.321	132.561	132.562	131.839	131.838	132.688	
	V-THET-BAR	18.274	23.992	27.697	28.924	28.365	23.003	11.651	
	MACH-BAR	0.405	0.404	0.404	0.405	0.403	0.399	0.397	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.3	-3.6	-3.3	-4.2	-5.7	-9.3	-14.9	
	OMEGABAR	0.046	0.045	0.036	0.015	0.016	0.018	0.021	
	TURNING	-7.7	-10.2	-11.8	-12.3	-12.1	-9.9	-5.0	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.094	10.095	10.103	10.119	10.119	10.118	10.115	10.111
WCOR= 1.542	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3585.1	P-STATIC	8.292	8.300	8.308	8.312	8.316	8.317	8.314	
	BETABAR	5.893	7.841	9.162	9.641	9.544	7.769	3.952	
	EPSILON	-1.170	-1.771	-3.132	-4.449	-5.635	-6.468	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	177.835	177.498	177.404	177.866	177.651	177.567	177.638	
	VZ-BAR	176.895	175.835	175.140	175.354	175.192	175.932	177.215	
	V-THET-BAR	18.259	24.214	28.248	29.786	29.456	24.002	12.243	
	MACH-BAR	0.537	0.536	0.536	0.537	0.537	0.536	0.537	
	U-WHEEL	228.655	235.461	249.075	262.688	276.302	289.915	296.722	
	V-BAR-PR	274.878	274.851	281.850	291.536	302.698	318.847	335.162	
	BETABAR-PR	49.944	50.227	51.581	53.023	54.635	56.509	58.079	
	V-THET-B-P	-210.395	-211.247	-220.827	-232.902	-246.845	-265.914	-284.479	
	MACH-BAR-P	0.831	0.830	0.851	0.881	0.915	0.963	1.013	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.316	14.682	14.997	14.747	14.677	14.372	14.133	14.682
ROTOR	T-TOTAL	325.05	324.80	325.77	323.94	324.57	326.84	327.93	325.22
	P-STATIC	9.908	9.995	10.202	10.414	10.599	10.778	10.865	
PR = 1.4520	BETABAR	45.607	44.532	44.291	42.938	43.025	44.601	43.071	
TR = 1.1286	EPSILON	-2.885	-2.726	-3.165	-4.336	-5.478	-6.270	-6.418	
EFF-A = 0.8757	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
EFF-P = 0.8810	V-BAR	255.289	260.579	261.191	248.149	240.635	227.653	218.345	
	VZ-BAR	178.594	185.758	186.960	181.665	175.918	162.093	159.502	
	V-THET-BAR	182.419	182.743	182.390	169.042	164.188	159.849	149.108	
	MACH-BAR	0.744	0.762	0.763	0.723	0.698	0.654	0.624	
	U-WHEEL	225.969	232.597	245.856	259.114	272.373	285.631	292.260	
	V-BAR-PR	183.827	192.334	197.457	202.789	206.529	205.177	214.321	
	BETABAR-PR	13.704	15.021	18.748	26.370	31.591	37.810	41.908	
	V-THET-B-P	-43.549	-49.854	-63.465	-90.072	-108.185	-125.782	-143.152	
	MACH-BAR-P	0.536	0.562	0.577	0.591	0.599	0.590	0.613	
	D-FACTOR	0.539	0.506	0.506	0.494	0.504	0.544	0.542	
	TURNING	36.2	35.2	32.8	26.7	23.0	18.7	16.2	
	INCID-M	-7.4	-5.9	-3.7	-2.5	-2.3	-2.1	-1.7	
	DEVIATION	25.6	18.8	10.1	8.7	6.4	6.6	8.1	
	OMEGABAR-P	0.190	0.118	0.088	0.081	0.102	0.187	0.229	
	LOSS PAR	0.065	0.041	0.032	0.029	0.036	0.065	0.076	
	PT-RATIO	1.418	1.454	1.484	1.457	1.451	1.421	1.397	1.4520
	EFF-AD	0.820	0.889	0.916	0.915	0.888	0.786	0.727	0.8757
	EFF-POLY	0.829	0.894	0.920	0.919	0.893	0.796	0.739	0.8810
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.316	14.676	14.998	14.752	14.680	14.375	14.133	14.682
	T-TOTAL	325.05	324.80	325.78	323.97	324.53	326.82	327.93	325.22
	P-STATIC	9.925	9.960	10.079	10.241	10.406	10.578	10.667	
	BETABAR	45.823	44.406	43.654	42.004	41.887	43.300	41.746	
	EPSILON	-0.113	-0.590	-2.506	-4.132	-5.141	-6.996	-7.979	
	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
	V-BAR	254.713	261.533	265.072	253.863	247.085	234.700	225.561	
	VZ-BAR	177.504	186.842	191.785	188.643	183.946	170.809	168.293	
	V-THET-BAR	182.677	182.999	182.979	169.882	164.967	160.961	150.185	
	MACH-BAR	0.743	0.765	0.775	0.741	0.719	0.677	0.647	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.654	13.947	14.605	14.440	14.283	13.784	13.373	14.198
ROTOR PLUS STATOR	T-TOTAL	325.05	324.79	325.79	323.97	324.54	326.85	327.93	325.22
	P-STATIC	11.782	11.799	11.802	11.773	11.732	11.678	11.647	
PR = 1.4041	BETABAR	15.624	14.033	12.649	12.102	12.713	12.469	11.537	
TR = 1.1286	EPSILON	0.450	0.078	-1.295	-2.591	-3.783	-4.985	-5.489	
EFF-A = 0.7921	K-BAR	0.905	0.905	0.905	0.905	0.905	0.905	0.905	
EFF-P = 0.8018	V-BAR	114.815	174.103	196.616	192.057	188.785	174.328	159.712	
	VZ-BAR	110.573	168.916	191.844	187.788	184.158	170.216	156.485	
	V-THET-BAR	30.922	42.171	43.054	40.266	41.543	37.639	31.942	
IGV,ROTOR,STATOR	MACH-BAR	0.321	0.494	0.560	0.548	0.538	0.493	0.449	
	EFF-POLY	0.581	0.767	0.854	0.866	0.811	0.699	0.613	
PR = 1.4013	INCID-M	-9.8	-8.2	-7.2	-8.5	-9.6	-10.3	-13.0	
TR = 1.1286	DEVIATION	14.8	12.7	11.8	11.7	13.3	14.4	14.5	
EFF-A = 0.7881	OMEGA-BAR	0.378	0.155	0.080	0.069	0.093	0.156	0.219	
EFF-P = 0.7971	LOSS PAR	0.129	0.054	0.030	0.027	0.038	0.066	0.095	
	D-FACTOR	0.760	0.529	0.461	0.449	0.446	0.488	0.528	
	TURNING	30.2	30.4	31.0	29.9	29.2	30.8	30.2	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 38)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.529	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3586.0	P-STATIC	9.378	9.379	9.383	9.392	9.404	9.420	9.430	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.927	-2.633	-4.270	-5.807	-7.293	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	112.401	112.354	112.025	111.377	110.415	109.136	108.368	
	VZ-BAR	112.401	112.354	112.025	111.377	110.415	109.136	108.368	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.334	0.334	0.333	0.331	0.328	0.324	0.322	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.095	10.096	10.103	10.120	10.119	10.118	10.116	10.112
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.060	9.062	9.069	9.079	9.091	9.104	9.111	
	BETABAR	8.613	9.992	11.521	12.116	11.945	9.999	5.851	
	EPSILON	-0.000	-0.904	-2.589	-4.192	-5.775	-7.295	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	132.741	132.664	132.632	132.936	132.132	131.161	130.582	
	VZ-BAR	131.244	130.650	129.959	129.975	129.271	129.164	129.902	
	V-THET-BAR	19.879	23.018	26.490	27.903	27.349	22.774	13.311	
	MACH-BAR	0.396	0.396	0.396	0.397	0.394	0.391	0.389	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.5	-3.8	-3.6	-4.4	-5.9	-9.2	-14.1	
	OMEGABAR	0.049	0.047	0.038	0.016	0.017	0.019	0.022	
	TURNING	-8.6	-10.0	-11.5	-12.1	-11.9	-10.0	-5.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.095	10.096	10.104	10.120	10.119	10.118	10.116	10.112
WCOR= 1.532	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3586.0	P-STATIC	8.372	8.379	8.385	8.390	8.394	8.395	8.392	
	BETABAR	6.570	7.696	8.974	9.517	9.419	7.882	4.625	
	EPSILON	-1.170	-1.720	-3.195	-4.619	-5.807	-6.577	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	173.608	173.267	173.293	173.774	173.527	173.392	173.460	
	VZ-BAR	172.468	171.725	171.171	171.382	171.187	171.750	172.895	
	V-THET-BAR	19.863	23.205	27.032	28.731	28.398	23.778	13.987	
	MACH-BAR	0.524	0.523	0.523	0.524	0.524	0.523	0.523	
	U-WHEEL	228.715	235.523	249.140	262.757	276.374	289.991	296.800	
	V-BAR-PR	270.859	273.073	280.414	290.071	301.327	316.810	331.475	
	BETABAR-PR	50.450	51.033	52.379	53.783	55.380	57.170	58.561	
	V-THET-B-P	-208.852	-212.318	-222.108	-234.027	-247.976	-266.213	-282.813	
	MACH-BAR-P	0.817	0.824	0.846	0.875	0.909	0.956	1.000	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
ROTOR	P-TOTAL	14.265	14.783	15.256	14.903	14.622	14.492	14.265	14.840
	T-TOTAL	325.43	324.96	325.95	324.78	325.54	327.66	329.37	325.83
PR = 1.4676	P-STATIC	10.117	10.211	10.435	10.651	10.840	11.018	11.109	
TR = 1.1367	BETABAR	48.677	45.428	44.508	44.485	44.827	46.840	46.832	
EFF-A = 0.8876	EPSILON	-2.885	-2.470	-3.174	-4.435	-5.597	-6.318	-6.418	
EFF-P = 0.8923	K-BAR	0.865	0.865	0.865	0.865	0.865	0.865	0.865	
	V-BAR	247.240	255.921	259.494	244.342	236.465	222.665	213.603	
	VZ-BAR	163.254	179.610	185.058	174.324	167.711	152.313	146.136	
	V-THET-BAR	185.676	182.292	181.909	171.214	166.699	162.421	155.791	
	MACH-BAR	0.718	0.747	0.757	0.710	0.684	0.638	0.608	
	U-WHEEL	226.028	232.658	245.920	259.182	272.444	285.706	292.337	
	V-BAR-PR	168.167	186.542	195.829	195.281	198.271	195.956	200.001	
	BETABAR-PR	13.884	15.659	19.080	26.776	32.232	38.988	43.057	
	V-THET-B-P	-40.352	-50.367	-64.011	-87.968	-105.746	-123.285	-136.546	
	MACH-BAR-P	0.488	0.544	0.571	0.567	0.573	0.562	0.570	
	D-FACTOR	0.592	0.525	0.510	0.522	0.534	0.574	0.587	
	TURNING	30.6	35.4	33.3	27.0	23.1	18.2	15.5	
	INCID-M	-0.9	-5.1	-2.9	-1.8	-1.5	-1.5	-1.2	
	DEVIATION	25.7	19.4	10.5	9.1	7.0	7.8	9.2	
	OMEGABAR-P	0.214	0.106	0.050	0.078	0.104	0.190	0.244	
	LOSS PAR	0.073	0.037	0.018	0.028	0.037	0.065	0.080	
	PT-RATIO	1.413	1.464	1.510	1.473	1.465	1.432	1.410	1.4676
	EFF-AD	0.803	0.902	0.953	0.920	0.888	0.789	0.722	0.8876
	EFF-POLY	0.812	0.907	0.956	0.924	0.894	0.799	0.735	0.8923
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.265	14.773	15.257	14.911	14.824	14.496	14.265	14.840
	T-TOTAL	325.43	324.96	325.94	324.80	325.51	327.63	329.37	325.83
	P-STATIC	10.158	10.200	10.323	10.491	10.665	10.844	10.928	
	BETABAR	49.142	45.509	43.920	43.544	43.730	45.597	45.637	
	EPSILON	-0.113	-0.759	-2.400	-3.999	-5.197	-6.937	-7.979	
	K-BAR	0.865	0.865	0.865	0.865	0.865	0.865	0.865	
	V-BAR	245.843	256.011	262.977	249.712	242.322	228.885	220.237	
	VZ-BAR	160.828	179.420	189.424	181.001	175.104	160.153	154.538	
	V-THET-BAR	185.939	182.596	182.416	172.030	167.507	163.521	156.915	
	MACH-BAR	0.714	0.747	0.768	0.727	0.702	0.657	0.629	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.684	14.044	14.837	14.629	14.416	13.964	13.598	14.372
ROTOR PLUS STATOR	T-TOTAL	325.43	324.96	325.94	324.81	325.50	327.63	329.37	325.83
	P-STATIC	12.021	12.030	12.024	11.999	11.961	11.916	11.891	
PR = 1.4213	BETABAR	16.502	14.379	12.822	12.252	13.175	12.997	12.074	
TR = 1.1307	EPSILON	0.450	0.141	-1.146	-2.429	-3.657	-4.874	-5.489	
EFF-A = 0.8085	K-BAR	0.905	0.905	0.905	0.905	0.905	0.905	0.905	
EFF-P = 0.8177	V-BAR	99.814	167.564	195.385	189.536	184.300	170.733	157.741	
	VZ-BAR	95.703	162.328	190.512	185.219	179.448	166.359	154.252	
IGV,ROTOR,STATOR	V-THET-BAR	28.352	41.550	43.359	40.222	42.007	38.400	32.994	
	MACH-BAR	0.278	0.474	0.556	0.540	0.523	0.481	0.442	
	EFF-POLY	0.588	0.763	0.844	0.872	0.803	0.715	0.637	
PR = 1.4186	INCID-M	-6.5	-7.1	-6.9	-7.0	-7.8	-8.0	-9.3	
TR = 1.1307	DEVIATION	15.7	13.1	11.9	11.9	13.8	15.0	15.0	
EFF-A = 0.8048	OMEGA-BAR	0.385	0.159	0.085	0.064	0.098	0.146	0.200	
EFF-P = 0.8132	LOSS PAR	0.131	0.056	0.032	0.025	0.040	0.061	0.086	
	D-FACTOR	0.821	0.544	0.460	0.454	0.458	0.495	0.537	
	TURNING	32.6	31.1	31.1	31.3	30.6	32.6	33.4	

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Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 39)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.506	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3581.5	P-STATIC	9.404	9.405	9.409	9.416	9.428	9.444	9.453	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.636	-4.225	-5.790	-7.295	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	110.437	110.388	110.074	109.466	108.538	107.302	106.554	
	VZ-BAR	110.437	110.388	110.074	109.466	108.538	107.302	106.554	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.328	0.328	0.327	0.325	0.322	0.318	0.316	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.096	10.098	10.105	10.121	10.121	10.119	10.118	10.114
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.085	9.086	9.093	9.103	9.115	9.129	9.136	
	BETABAR	8.313	10.253	11.821	12.396	12.089	9.768	5.847	
	EPSILON	-0.000	-0.910	-2.561	-4.167	-5.729	-7.291	-8.118	
	K-BAR	0.945	0.945	0.945	0.945	0.944	0.944	0.945	
	V-BAR	131.166	131.145	131.138	131.387	130.592	129.601	129.018	
	VZ-BAR	129.788	129.048	128.356	128.324	127.696	127.717	128.347	
	V-THET-BAR	18.904	23.342	26.864	28.205	27.350	21.988	13.142	
	MACH-BAR	0.391	0.391	0.391	0.392	0.389	0.386	0.385	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.8	-3.5	-3.3	-4.1	-5.8	-9.5	-14.1	
	OMEGABAR	0.048	0.046	0.036	0.015	0.015	0.017	0.020	
	TURNING	-8.3	-10.3	-11.8	-12.4	-12.1	-9.8	-5.8	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.096	10.098	10.106	10.121	10.121	10.119	10.118	10.114
WCOR= 1.509	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3581.5	P-STATIC	8.419	8.425	8.430	8.434	8.438	8.439	8.437	
	BETABAR	6.357	7.922	9.226	9.754	9.544	7.711	4.628	
	EPSILON	-1.170	-1.597	-3.012	-4.565	-5.884	-6.661	-6.637	
	K-BAR	0.945	0.945	0.945	0.945	0.945	0.945	0.945	
	V-BAR	171.143	170.849	170.938	171.442	171.207	171.063	171.146	
	VZ-BAR	170.091	169.217	168.727	168.964	168.837	169.512	170.588	
	V-THET-BAR	18.949	23.545	27.405	29.044	28.388	22.953	13.810	
	MACH-BAR	0.516	0.515	0.515	0.517	0.516	0.516	0.516	
	U-WHEEL	228.426	235.227	248.827	262.427	276.027	289.627	296.427	
	V-BAR-PR	269.837	271.005	278.383	288.127	299.720	315.991	330.110	
	BETABAR-PR	50.924	51.361	52.691	54.096	55.713	57.556	58.885	
	V-THET-B-P	-209.479	-211.682	-221.422	-233.383	-247.639	-266.674	-282.617	
	MACH-BAR-P	0.814	0.817	0.839	0.869	0.904	0.953	0.995	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.133	14.867	15.499	15.322	15.085	14.784	14.478	15.105
ROTOR	T-TOTAL	326.21	326.14	327.04	325.54	326.85	329.05	330.90	326.96
	P-STATIC	10.448	10.579	10.846	11.076	11.257	11.429	11.514	
PR = 1.4936	BETABAR	54.038	49.668	47.743	46.537	48.387	50.281	51.710	
TR = 1.1346	EPSILON	-2.885	-2.227	-3.043	-4.407	-5.031	-6.384	-6.418	
EFF-A = 0.9036	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.9075	V-BAR	232.798	246.343	252.400	240.638	229.520	216.483	205.198	
	VZ-BAR	136.712	159.450	169.726	165.531	152.425	138.338	127.151	
	V-THET-BAR	188.427	187.753	186.812	174.660	171.597	166.516	161.056	
	MACH-BAR	0.671	0.714	0.733	0.697	0.660	0.618	0.581	
	U-WHEEL	225.744	232.366	245.611	258.857	272.102	285.347	291.970	
	V-BAR-PR	141.713	165.574	179.640	185.732	182.583	182.374	182.499	
	BETABAR-PR	15.267	15.627	19.104	26.959	33.401	40.662	45.835	
	V-THET-B-P	-37.317	-44.613	-58.800	-84.197	-100.505	-118.831	-130.914	
	MACH-BAR-P	0.409	0.480	0.521	0.538	0.525	0.520	0.517	
	D-FACTOR	0.693	0.606	0.570	0.556	0.591	0.623	0.645	
	TURNING	35.7	35.7	33.6	27.1	22.3	16.9	13.0	
	INCID-M	-6.5	-4.8	-2.6	-1.5	-1.2	-1.1	-0.9	
	DEVIATION	27.1	19.4	10.5	9.3	8.2	9.4	12.0	
	OMEGABAR-P	0.262	0.127	0.040	0.030	0.097	0.181	0.248	
	LOSS PAR	0.088	0.044	0.014	0.011	0.034	0.060	0.078	
	PT-RATIO	1.400	1.472	1.534	1.514	1.491	1.461	1.431	1.4936
	EFF-AD	0.764	0.887	0.964	0.970	0.900	0.806	0.727	0.9036
	EFF-POLY	0.775	0.893	0.966	0.971	0.905	0.816	0.740	0.9075
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.133	14.850	15.496	15.330	15.092	14.791	14.478	15.105
	T-TOTAL	326.21	326.13	327.05	325.56	326.80	329.00	330.90	326.96
	P-STATIC	10.515	10.585	10.754	10.938	11.125	11.304	11.393	
	BETABAR	54.982	49.933	47.265	45.693	47.444	49.329	50.669	
	EPSILON	-0.113	-0.702	-2.554	-3.781	-5.013	-6.400	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	230.404	245.734	255.170	245.218	234.049	221.049	209.722	
	VZ-BAR	132.215	156.196	173.156	171.285	158.292	144.061	132.922	
	V-THET-BAR	188.694	188.001	187.422	175.479	172.399	167.658	162.219	
	MACH-BAR	0.664	0.712	0.741	0.711	0.675	0.632	0.595	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.745	14.170	15.037	14.888	14.600	14.247	13.981	14.592
ROTOR PLUS STATOR	T-TOTAL	326.21	326.10	327.07	325.58	326.75	328.95	330.90	326.96
	P-STATIC	12.351	12.364	12.373	12.348	12.311	12.268	12.242	
PR = 1.4428	BETABAR	18.082	15.205	13.235	12.717	13.457	13.433	13.053	
TR = 1.1346	EPSILON	0.450	0.115	-1.212	-2.429	-3.574	-4.767	-5.489	
EFF-A = 0.8202	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8293	V-BAR	76.498	157.611	188.697	184.488	176.663	166.282	157.338	
	VZ-BAR	72.720	152.109	183.685	179.962	171.813	161.732	153.273	
	V-THET-BAR	23.743	41.266	43.199	40.612	41.110	38.630	35.534	
IGV,ROTOR,STATOR	MACH-BAR	0.212	0.444	0.535	0.524	0.500	0.467	0.440	
	EFF-POLY	0.608	0.767	0.821	0.803	0.755	0.688	0.672	
PR = 1.4403	INCID-M	-0.7	-2.7	-3.6	-4.8	-4.1	-4.3	-4.1	
TR = 1.1346	DEVIATION	17.3	13.9	12.3	12.4	14.1	15.4	16.0	
EFF-A = 0.8171	OMEGA-BAR	0.384	0.160	0.097	0.101	0.124	0.156	0.161	
EFF-P = 0.8253	LOSS PAR	0.129	0.056	0.036	0.039	0.050	0.066	0.069	
	D-FACTOR	0.922	0.573	0.477	0.470	0.482	0.505	0.521	
	TURNING	36.9	34.7	34.0	33.0	34.0	35.9	37.6	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 40)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.495	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3586.1	P-STATIC	9.400	9.401	9.404	9.412	9.424	9.440	9.449	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.611	-4.256	-5.788	-7.290	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	110.744	110.694	110.389	109.771	108.844	107.606	106.854	
	VZ-BAR	110.744	110.694	110.389	109.771	108.844	107.606	106.854	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.329	0.329	0.328	0.326	0.323	0.319	0.317	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.097	10.099	10.106	10.121	10.121	10.120	10.119	10.114
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.115	9.117	9.124	9.134	9.145	9.158	9.165	
	BETABAR	9.127	10.166	11.626	12.341	12.042	9.842	5.902	
	EPSILON	-0.000	-0.910	-2.542	-4.175	-5.733	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	129.143	129.117	129.130	129.361	128.610	127.632	127.063	
	VZ-BAR	127.508	127.089	126.481	126.391	125.780	125.756	126.390	
	V-THET-BAR	20.486	22.788	26.021	27.652	26.832	21.773	13.065	
	MACH-BAR	0.385	0.385	0.385	0.386	0.383	0.380	0.379	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.0	-3.6	-3.5	-4.2	-5.8	-9.4	-14.8	
	OMEGABAR	0.047	0.045	0.035	0.014	0.014	0.016	0.019	
	TURNING	-9.1	-10.2	-11.6	-12.3	-12.0	-9.8	-5.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.097	10.099	10.107	10.122	10.121	10.120	10.119	10.114
WCOR= 1.497	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3586.1	P-STATIC	8.476	8.482	8.486	8.488	8.492	8.494	8.491	
	BETABAR	6.996	7.867	9.099	9.727	9.526	7.770	4.082	
	EPSILON	-1.170	-1.512	-2.965	-4.578	-6.037	-6.764	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	168.056	167.786	167.932	168.521	168.301	168.127	168.202	
	VZ-BAR	166.805	166.206	165.818	166.098	165.980	166.580	167.641	
	V-THET-BAR	20.470	22.965	26.556	28.471	27.852	22.730	13.726	
	MACH-BAR	0.506	0.505	0.506	0.508	0.507	0.506	0.507	
	U-WHEEL	228.722	235.530	249.147	262.765	276.383	290.000	296.809	
	V-BAR-PR	266.820	269.831	277.566	287.199	298.861	314.935	328.995	
	BETABAR-PR	51.306	51.977	53.315	54.665	56.262	58.065	59.366	
	V-THET-B-P	-208.252	-212.565	-222.591	-234.294	-248.530	-267.271	-283.080	
	MACH-BAR-P	0.804	0.813	0.836	0.865	0.900	0.949	0.991	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1296	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.072	14.827	15.502	15.392	15.188	14.819	14.549	15.147
ROTOR	T-TOTAL	326.58	326.53	327.46	325.88	327.59	329.99	331.45	327.50
	P-STATIC	10.634	10.756	11.018	11.256	11.458	11.640	11.736	
PR = 1.4976	BETABAR	58.432	51.930	49.293	47.771	50.301	53.729	54.784	
TR = 1.1365	EPSILON	-2.885	-2.066	-2.807	-4.274	-5.622	-6.473	-6.418	
EFF-A = 0.8977	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9048	V-BAR	224.649	239.701	247.300	236.630	225.625	209.990	199.123	
	VZ-BAR	117.607	147.825	161.285	159.037	144.119	124.233	114.827	
	V-THET-BAR	191.404	188.642	187.466	175.217	173.598	169.297	162.680	
	MACH-BAR	0.645	0.693	0.716	0.684	0.647	0.597	0.563	
	U-WHEEL	226.035	232.665	245.927	259.190	272.452	285.714	292.345	
	V-BAR-PR	122.600	154.242	171.571	179.862	174.764	170.268	173.401	
	BETABAR-PR	16.408	16.577	19.919	27.833	34.447	43.139	48.473	
	V-THET-B-P	-34.631	-44.023	-58.462	-83.972	-98.854	-110.417	-129.666	
	MACH-BAR-P	0.352	0.446	0.497	0.520	0.501	0.484	0.489	
	D-FACTOR	0.764	0.648	0.600	0.577	0.620	0.664	0.675	
	TURNING	34.9	35.4	33.4	26.8	21.8	14.9	10.9	
	INCID-M	-0.1	-4.2	-2.0	-0.9	-0.6	-0.6	-0.4	
	DEVIATION	28.3	20.3	11.3	10.2	9.3	11.9	14.6	
	OMEGABAR-P	0.288	0.147	0.052	0.028	0.100	0.197	0.254	
	LOSS PAR	0.097	0.051	0.019	0.010	0.035	0.063	0.075	
	PT-RATIO	1.394	1.468	1.534	1.521	1.501	1.464	1.438	1.4976
	EFF-AD	0.747	0.871	0.953	0.972	0.899	0.793	0.728	0.8977
	EFF-POLY	0.758	0.878	0.956	0.974	0.904	0.804	0.741	0.9048
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.072	14.810	15.498	15.399	15.195	14.826	14.549	15.147
	T-TOTAL	326.58	326.52	327.48	325.89	327.52	329.95	331.45	327.50
	P-STATIC	10.667	10.752	10.932	11.136	11.326	11.504	11.595	
	BETABAR	59.061	52.134	48.821	47.010	49.233	52.366	53.237	
	EPSILON	-0.113	-0.779	-2.517	-3.899	-5.185	-6.344	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	223.471	239.425	249.888	240.638	230.192	215.282	204.533	
	VZ-BAR	114.891	146.990	164.528	164.084	150.315	131.454	122.415	
	V-THET-BAR	191.674	188.927	188.078	176.020	174.335	170.488	163.854	
	MACH-BAR	0.642	0.692	0.724	0.696	0.662	0.613	0.579	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.786	14.223	15.074	14.964	14.884	14.384	14.086	14.674
ROTOR PLUS STATOR	T-TOTAL	326.58	326.46	327.52	325.91	327.40	329.87	331.45	327.50
	P-STATIC	12.471	12.482	12.492	12.469	12.434	12.394	12.370	
PR = 1.4504	BETABAR	17.357	14.837	13.466	13.054	13.700	14.039	14.162	
TR = 1.1365	EPSILON	0.450	0.117	-1.215	-2.350	-3.379	-4.683	-5.489	
EFF-A = 0.8219	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8310	V-BAR	68.244	154.445	185.459	182.328	174.700	166.140	155.780	
	VZ-BAR	65.136	149.306	180.361	177.616	169.729	161.178	151.052	
	V-THET-BAR	20.359	39.507	43.167	41.180	41.375	40.301	38.116	
IGV+ROTOR+STATOR	MACH-BAR	0.189	0.434	0.525	0.517	0.493	0.466	0.435	
	EFF-POLY	0.619	0.787	0.824	0.796	0.738	0.710	0.666	
PR = 1.4484	INCID-M	3.4	-0.5	-2.0	-3.5	-4.3	-1.3	-1.5	
TR = 1.1365	DEVIATION	16.6	13.5	12.6	12.7	14.3	16.0	17.1	
EFF-A = 0.8191	OMEGA-BAR	0.378	0.145	0.093	0.102	0.132	0.133	0.150	
EFF-P = 0.8272	LOSS PAR	0.128	0.051	0.034	0.040	0.053	0.056	0.067	
	D-FACTOR	0.966	0.579	0.488	0.469	0.485	0.496	0.515	
	TURNING	41.7	37.3	35.4	34.0	35.5	38.3	39.1	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 41)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.472	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3571.1	P-STATIC	9.424	9.425	9.428	9.436	9.447	9.463	9.472	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.611	-4.225	-5.770	-7.240	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	108.854	108.808	108.507	107.905	106.992	105.775	105.035	
	VZ-BAR	108.854	108.808	108.507	107.905	106.992	105.775	105.035	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.323	0.323	0.322	0.320	0.317	0.314	0.312	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.099	10.100	10.108	10.122	10.123	10.121	10.120	10.116
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.128	9.129	9.136	9.146	9.157	9.170	9.176	
	BETABAR	8.296	10.288	11.811	12.329	12.009	9.590	5.894	
	EPSILON	-0.000	-0.910	-2.542	-4.167	-5.729	-7.291	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	128.371	128.377	128.386	128.629	127.869	126.892	126.342	
	VZ-BAR	127.027	126.310	125.668	125.662	125.070	125.114	125.674	
	V-THET-BAR	18.522	22.927	26.278	27.465	26.605	21.140	12.975	
	MACH-BAR	0.383	0.383	0.383	0.383	0.381	0.378	0.376	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.8	-3.5	-3.3	-4.2	-5.9	-9.6	-14.0	
	OMEGABAR	0.047	0.044	0.034	0.013	0.013	0.015	0.018	
	TURNING	-8.3	-10.3	-11.8	-12.3	-12.0	-9.6	-5.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.099	10.100	10.108	10.123	10.123	10.121	10.120	10.116
WCOR= 1.474	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3571.1	P-STATIC	8.496	8.505	8.507	8.509	8.512	8.513	8.511	
	BETABAR	6.367	7.980	9.247	9.726	9.503	7.590	4.678	
	EPSILON	-1.170	-1.428	-2.814	-4.458	-5.985	-6.785	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	166.884	166.601	166.805	167.413	167.241	167.094	167.178	
	VZ-BAR	165.854	164.966	164.638	165.107	164.946	165.627	166.621	
	V-THET-BAR	18.508	23.128	26.805	28.282	27.610	22.069	13.634	
	MACH-BAR	0.502	0.502	0.502	0.504	0.504	0.503	0.503	
	U-WHEEL	227.760	234.539	248.100	261.660	275.220	288.781	295.561	
	V-BAR-PR	267.010	268.170	275.822	285.820	297.521	313.956	327.483	
	BETABAR-PR	51.660	52.031	53.351	54.736	56.329	58.159	59.417	
	V-THET-B-P	-209.252	-211.412	-221.295	-233.378	-247.610	-266.712	-281.927	
	MACH-BAR-P	0.804	0.807	0.830	0.861	0.896	0.945	0.986	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.981	14.805	15.466	15.461	15.287	14.910	14.640	15.192
ROTOR	T-TOTAL	327.07	326.77	327.61	325.94	327.88	330.47	332.26	327.75
	P-STATIC	10.701	10.824	11.098	11.349	11.554	11.748	11.840	
PR = 1.5018	BETABAR	61.024	53.454	50.730	48.347	51.049	54.847	56.890	
TR = 1.1374	EPSILON	-2.865	-2.081	-2.697	-4.156	-5.559	-6.409	-6.418	
EFF-A = 0.8990	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.9028	V-BAR	219.846	236.996	244.011	235.315	225.046	209.072	198.175	
	VZ-BAR	106.504	141.149	154.447	156.394	141.477	126.379	108.253	
	V-THET-BAR	192.326	190.320	188.907	175.824	175.014	170.936	165.996	
	MACH-BAR	0.630	0.684	0.705	0.680	0.645	0.594	0.559	
	U-WHEEL	225.084	231.687	244.893	258.100	271.306	284.513	291.116	
	V-BAR-PR	111.426	147.066	164.300	176.731	171.139	165.518	165.450	
	BETABAR-PR	17.097	16.331	19.916	27.746	34.241	43.335	49.134	
	V-THET-B-P	-32.758	-41.367	-55.986	-82.276	-96.293	-113.578	-125.120	
	MACH-BAR-P	0.319	0.424	0.475	0.510	0.491	0.470	0.467	
	D-FACTOR	0.809	0.675	0.625	0.587	0.632	0.682	0.702	
	TURNING	34.5	35.7	33.4	27.0	22.1	14.8	10.3	
	INCID-M	-5.6	-4.1	-1.9	-0.8	-0.6	-0.5	-0.4	
	DEVIATION	24.0	20.1	11.3	10.1	9.1	12.1	15.3	
	OMEGABAR-P	0.318	0.160	0.064	0.019	0.093	0.196	0.256	
	LOSS PAR	0.107	0.055	0.023	0.007	0.032	0.063	0.076	
	PT-RATIO	1.384	1.466	1.530	1.527	1.510	1.473	1.447	1.5018
	EFF-AD	0.722	0.862	0.944	0.981	0.907	0.797	0.727	0.8996
	EFF-POLY	0.734	0.869	0.947	0.982	0.912	0.808	0.741	0.9028
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.981	14.787	15.461	15.465	15.295	14.917	14.640	15.192
	T-TOTAL	327.07	326.76	327.64	325.95	327.80	330.43	332.26	327.75
	P-STATIC	10.729	10.819	11.020	11.230	11.424	11.609	11.699	
	BETABAR	61.672	53.668	50.311	47.592	49.970	53.462	55.233	
	EPSILON	-0.113	-0.672	-2.601	-3.700	-5.094	-6.739	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	218.803	236.702	246.369	239.180	229.514	214.203	203.528	
	VZ-BAR	103.825	140.272	157.331	161.305	147.621	127.527	116.059	
	V-THET-BAR	192.597	190.589	189.585	176.601	175.736	172.103	167.194	
	MACH-BAR	0.627	0.683	0.713	0.692	0.659	0.609	0.575	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.866	14.266	15.043	15.013	14.766	14.514	14.177	14.730
ROTOR PLUS STATOR	T-TOTAL	327.07	326.74	327.67	325.95	327.66	330.31	332.26	327.75
	P-STATIC	12.606	12.616	12.624	12.603	12.571	12.532	12.508	
PR = 1.4561	BETABAR	18.579	15.406	13.820	13.546	14.100	14.596	14.959	
TR = 1.1374	EPSILON	0.450	0.067	-1.270	-2.428	-3.382	-4.629	-5.489	
EFF-A = 0.8252	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8342	V-BAR	62.003	150.033	179.336	178.689	171.993	165.088	153.177	
	VZ-BAR	58.772	144.654	174.144	173.863	166.811	159.760	147.986	
	V-THET-BAR	19.755	39.810	42.639	41.246	41.899	41.602	39.536	
IGV,ROTOR,STATOR	MACH-BAR	0.172	0.421	0.507	0.506	0.485	0.463	0.427	
	EFF-POLY	0.659	0.810	0.829	0.794	0.738	0.744	0.675	
PR = 1.4538	INCID-M	6.0	1.0	-0.5	-2.9	-1.5	-0.2	0.5	
TR = 1.1374	DEVIATION	17.8	14.1	12.9	13.0	14.7	16.6	17.9	
EFF-A = 0.8231	OMEGA-BAR	0.343	0.131	0.094	0.107	0.137	0.122	0.157	
EFF-P = 0.8307	LOSS PAR	0.115	0.046	0.035	0.041	0.055	0.051	0.067	
	D-FACTOR	0.597	0.595	0.501	0.481	0.497	0.499	0.530	
	TURNING	43.1	38.3	36.5	34.2	35.9	38.9	40.3	

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Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 42)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WLOR= 1.451	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NLOR= 3581.2	P-STATIC	9.446	9.446	9.450	9.458	9.469	9.483	9.492	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.908	-2.609	-4.221	-5.767	-7.287	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	107.129	107.079	106.780	106.184	105.281	104.073	103.340	
	VZ-BAR	107.129	107.079	106.780	106.184	105.281	104.073	103.340	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.318	0.318	0.317	0.315	0.312	0.309	0.306	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.100	10.102	10.109	10.123	10.124	10.122	10.121	10.117
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.183	9.185	9.192	9.201	9.212	9.223	9.229	
	BETABAR	8.968	10.278	11.655	12.198	11.925	9.239	5.489	
	EPSILON	-0.000	-0.899	-2.540	-4.136	-5.721	-7.287	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	124.583	124.571	124.594	124.858	124.122	123.199	122.707	
	VZ-BAR	123.660	122.571	122.024	122.039	121.443	121.596	122.144	
	V-THET-BAR	19.421	22.227	25.170	26.381	25.648	19.780	11.738	
	MACH-BAR	0.371	0.371	0.371	0.372	0.370	0.367	0.365	
	INCID-M	24.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.1	-3.5	-3.5	-4.3	-6.0	-10.0	-14.4	
	OMEGABAR	0.046	0.043	0.033	0.012	0.012	0.014	0.016	
	TURNING	-9.0	-10.3	-11.7	-12.2	-11.9	-9.2	-5.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.100	10.102	10.110	10.123	10.124	10.122	10.121	10.117
WLOR= 1.453	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NLOR= 3581.2	P-STATIC	8.598	8.605	8.607	8.607	8.610	8.612	8.609	
	BETABAR	6.909	8.002	9.160	9.656	9.467	7.340	4.474	
	EPSILON	-1.170	-1.280	-2.686	-4.422	-6.090	-6.941	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	161.408	161.020	161.292	161.964	161.802	161.613	161.717	
	VZ-BAR	160.136	159.452	159.235	159.670	159.598	160.285	161.246	
	V-THET-BAR	19.402	22.413	25.675	27.167	26.612	20.646	12.334	
	MACH-BAR	0.485	0.484	0.485	0.487	0.486	0.486	0.486	
	U-WHEEL	228.468	235.206	248.865	262.404	276.003	289.602	296.401	
	V-BAR-PR	263.297	265.906	274.123	284.309	296.088	313.097	326.642	
	BETABAR-PR	52.541	53.154	54.486	55.832	57.382	59.206	60.419	
	V-THET-B-P	-209.002	-212.793	-223.130	-235.237	-249.391	-268.956	-284.067	
	MACH-BAR-P	0.791	0.799	0.824	0.855	0.890	0.941	0.982	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.900	14.863	15.544	15.596	15.428	15.003	14.680	15.300
ROTOR	T-TOTAL	327.39	327.20	328.17	326.19	328.42	331.27	332.72	328.23
PR = 1.5124	P-STATIC	10.831	10.960	11.235	11.490	11.696	11.891	11.984	
IR = 1.1390	BETABAR	65.907	54.745	51.661	48.486	51.569	56.130	58.710	
EFF-A = 0.9046	EPSILON	-2.885	-1.978	-2.642	-4.161	-5.685	-6.450	-6.418	
EFF-P = 0.9079	K-BAR	0.965	0.965	0.965	0.965	0.965	0.965	0.965	
	V-BAR	216.709	234.020	241.641	234.048	224.045	206.779	194.054	
	VZ-BAR	86.832	135.117	149.886	155.129	139.260	115.250	100.785	
	V-THET-BAR	194.178	190.984	189.530	175.252	175.505	171.676	165.828	
	MACH-BAR	0.606	0.674	0.697	0.675	0.642	0.588	0.546	
	U-WHEEL	225.724	232.346	245.590	258.834	272.078	285.322	291.944	
	V-BAR-PR	92.385	141.306	160.045	176.227	169.473	161.893	161.440	
	BETABAR-PR	19.967	17.020	20.496	28.315	34.741	44.600	51.370	
	V-THET-B-P	-31.546	-41.362	-56.060	-83.582	-96.573	-113.647	-126.116	
	MACH-BAR-P	0.264	0.407	0.462	0.508	0.485	0.459	0.454	
	D-FACTOR	0.860	0.695	0.641	0.587	0.639	0.696	0.715	
	TURNING	32.6	36.1	34.0	27.5	22.6	14.6	9.0	
	INCID-M	-4.8	-3.0	-0.8	0.3	0.5	0.0	0.0	
	DEVIATION	31.8	20.8	11.9	10.6	9.6	13.4	17.5	
	OMEGABAR-P	0.350	0.165	0.068	0.004	0.086	0.202	0.263	
	LOSS PAR	0.115	0.057	0.024	0.001	0.030	0.063	0.074	
	PT-RATIO	1.376	1.471	1.538	1.541	1.524	1.482	1.450	1.5124
	EFF-AD	0.702	0.861	0.942	0.996	0.916	0.796	0.725	0.9046
	EFF-POLY	0.715	0.869	0.946	0.996	0.921	0.807	0.739	0.9079
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.900	14.863	15.537	15.598	15.437	15.013	14.680	15.300
	T-TOTAL	327.39	327.19	328.21	326.20	328.33	331.42	332.72	328.23
	P-STATIC	10.854	10.954	11.160	11.380	11.578	11.763	11.855	
	BETABAR	66.627	54.978	51.266	47.799	50.576	54.763	57.068	
	EPSILON	-0.113	-0.590	-2.373	-3.696	-4.983	-6.654	-7.979	
	K-BAR	0.965	0.965	0.965	0.965	0.965	0.965	0.965	
	V-BAR	211.836	233.710	243.903	237.615	228.125	211.660	199.001	
	VZ-BAR	84.039	134.165	152.605	159.614	144.872	122.125	108.185	
	V-THET-BAR	194.452	191.259	190.256	176.023	176.215	172.870	167.025	
	MACH-BAR	0.605	0.673	0.704	0.686	0.654	0.601	0.561	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.948	14.362	15.113	15.663	14.836	14.598	14.206	14.805
ROTOR PLUS STATOR	T-TOTAL	327.39	327.16	328.24	326.20	328.12	331.08	332.72	328.23
PR = 1.4634	P-STATIC	12.763	12.770	12.767	12.747	12.719	12.685	12.666	
IR = 1.1390	BETABAR	20.178	15.557	13.913	13.588	14.348	14.657	15.030	
EFF-A = 0.8266	EPSILON	0.450	-0.027	-1.395	-2.450	-3.297	-4.555	-5.489	
EFF-P = 0.8357	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	51.909	146.833	176.179	174.725	168.450	161.751	146.818	
	VZ-BAR	48.723	141.465	171.011	169.835	163.196	156.488	141.795	
IGV,ROTOR,STATOR	V-THET-BAR	17.904	39.334	42.360	41.048	41.742	40.926	38.074	
	MACH-BAR	0.143	0.412	0.497	0.494	0.474	0.452	0.408	
PR = 1.4613	EFF-POLY	0.695	0.823	0.826	0.763	0.714	0.739	0.667	
TR = 1.1390	INCID-M	11.0	2.3	0.4	-2.7	-0.9	1.1	2.3	
EFF-A = 0.8250	DEVIATION	19.4	14.2	13.0	13.2	15.0	16.6	18.0	
EFF-P = 0.8325	OMEGA-BAR	0.315	0.124	0.097	0.127	0.156	0.128	0.168	
	LOSS PAR	0.104	0.043	0.036	0.049	0.063	0.053	0.072	
	D-FACTOR	1.050	0.606	0.510	0.494	0.510	0.513	0.554	
	TURNING	46.4	39.4	37.4	34.2	36.2	40.1	42.0	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 43)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.416	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3552.4	P-STATIC	9.467	9.467	9.471	9.478	9.488	9.502	9.511	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.609	-4.228	-5.782	-7.290	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	W-BAR	105.452	105.412	105.124	104.550	103.685	102.507	101.795	
	VZ-BAR	105.452	105.412	105.124	104.550	103.685	102.507	101.795	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.313	0.313	0.312	0.310	0.307	0.304	0.302	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.102	10.104	10.111	10.125	10.125	10.124	10.123	10.118
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.214	9.219	9.221	9.230	9.240	9.252	9.258	
	BETABAR	8.685	10.002	11.483	12.200	12.109	9.626	5.490	
	EPSILON	-0.000	-0.879	-2.548	-4.135	-5.713	-7.291	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	122.574	122.594	122.662	122.905	122.204	121.271	120.790	
	VZ-BAR	121.169	120.729	120.207	120.129	119.485	119.558	120.196	
	V-THET-BAR	18.508	21.292	24.420	25.973	25.635	20.278	11.552	
	MACH-BAR	0.365	0.365	0.366	0.366	0.364	0.361	0.359	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.4	-3.8	-3.7	-4.3	-5.8	-9.6	-14.4	
	OMEGABAR	0.045	0.041	0.031	0.011	0.010	0.012	0.014	
	TURNING	-8.7	-10.0	-11.5	-12.2	-12.1	-9.0	-5.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.102	10.104	10.112	10.125	10.125	10.124	10.123	10.118
WCOR= 1.418	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3552.4	P-STATIC	8.650	8.656	8.657	8.657	8.661	8.664	8.661	
	BETABAR	6.702	7.798	9.045	9.676	9.637	7.662	4.384	
	EPSILON	-1.170	-1.225	-2.717	-4.480	-6.230	-7.019	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	W-BAR	158.457	158.206	158.513	159.158	158.951	158.722	158.814	
	VZ-BAR	157.375	156.742	156.542	156.894	156.707	157.300	158.349	
	V-THET-BAR	18.493	21.464	24.919	26.750	26.610	21.162	12.139	
	MACH-BAR	0.476	0.475	0.476	0.478	0.477	0.477	0.477	
	U-WHEEL	226.571	233.315	246.805	260.294	273.784	287.273	294.018	
	W-BAR-PR	260.889	263.533	271.549	281.353	292.666	309.127	323.312	
	BETABAR-PR	52.899	53.503	54.796	56.166	57.625	59.411	60.074	
	W-THET-B-P	-208.077	-211.854	-221.885	-233.544	-247.174	-266.111	-281.879	
	MACH-BAR-P	0.784	0.791	0.816	0.845	0.879	0.929	0.971	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.809	14.892	15.528	15.592	15.415	14.960	14.690	15.293
ROTOR	T-TOTAL	327.88	327.65	328.38	328.21	328.41	331.41	333.41	328.36
PR = 1.5114	P-STATIC	10.817	10.957	11.242	11.498	11.705	11.898	11.992	
TR = 1.1395	BETABAR	69.136	55.409	52.283	48.908	52.309	57.795	60.627	
EFF-A = 0.9605	EPSILON	-2.885	-1.883	-2.419	-4.227	-5.756	-6.537	-6.418	
EFF-P = 0.9039	K-BAR	0.965	0.965	0.965	0.965	0.965	0.965	0.965	
	W-BAR	210.679	234.978	241.143	233.716	223.385	205.355	194.255	
	VZ-BAR	75.035	133.439	147.515	153.613	136.580	109.467	95.280	
	V-THET-BAR	196.863	193.313	190.750	176.142	176.761	173.740	169.284	
	MACH-BAR	0.601	0.677	0.695	0.674	0.640	0.581	0.546	
	U-WHEEL	243.909	230.477	243.615	256.753	269.890	283.028	289.596	
	W-BAR-PR	79.761	138.518	156.722	173.493	165.320	154.718	153.471	
	BETABAR-PR	19.822	15.558	19.704	27.686	34.293	44.960	51.623	
	W-THET-B-P	-27.046	-97.164	-52.865	-80.611	-93.130	-109.288	-120.313	
	MACH-BAR-P	0.228	0.399	0.452	0.500	0.473	0.438	0.432	
	D-FACTOR	0.932	0.708	0.653	0.594	0.650	0.718	0.741	
	TURNING	33.1	37.9	35.1	28.4	23.3	14.5	9.1	
	INCID-M	-4.5	-2.6	-0.5	0.6	0.7	0.8	0.9	
	DEVIATION	31.7	19.3	11.1	10.0	9.1	13.7	17.8	
	OMEGABAR-P	0.387	0.176	0.076	0.006	0.090	0.214	0.280	
	LOSS PAR	0.128	0.061	0.027	0.002	0.031	0.067	0.078	
	PT-RATIO	1.367	1.474	1.536	1.540	1.522	1.478	1.451	1.5114
	EFF-AU	0.678	0.855	0.936	0.995	0.914	0.787	0.715	0.9005
	EFF-POLY	0.692	0.863	0.939	0.995	0.919	0.798	0.730	0.9039
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.809	14.874	15.522	15.594	15.426	14.969	14.690	15.293
	T-TOTAL	327.88	327.65	328.38	328.22	328.32	331.35	333.41	328.36
	P-STATIC	10.834	10.945	11.166	11.400	11.587	11.770	11.861	
	BETABAR	69.812	55.564	51.631	48.329	51.251	56.319	58.836	
	EPSILON	-0.113	-0.982	-2.709	-3.716	-4.974	-6.601	-7.979	
	K-BAR	0.965	0.965	0.965	0.965	0.965	0.965	0.965	
	W-BAR	210.047	234.944	243.425	236.864	227.579	210.208	199.257	
	VZ-BAR	72.490	132.903	150.259	157.479	142.445	116.582	103.109	
	W-THET-BAR	197.141	193.625	191.508	176.932	177.486	174.910	170.505	
	MACH-BAR	0.599	0.676	0.702	0.684	0.653	0.596	0.561	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.090	14.375	15.089	15.001	14.790	14.559	14.216	14.770
ROTOR PLUS STATOR	T-TOTAL	327.88	327.63	328.41	328.23	328.07	331.12	333.41	328.36
PR = 1.4597	P-STATIC	12.783	12.793	12.801	12.781	12.751	12.718	12.696	
TR = 1.1395	BETABAR	18.937	16.040	14.240	13.811	14.360	14.648	14.983	
EFF-A = 0.8183	EPSILON	0.450	-0.136	-1.445	-2.409	-3.181	-4.446	-5.489	
EFF-P = 0.8277	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	W-BAR	66.731	146.418	174.021	171.224	165.366	158.768	145.894	
IGV,ROTOR,STATOR	VZ-BAR	63.119	140.730	168.674	166.274	160.199	153.608	140.934	
	V-THET-BAR	21.656	40.407	42.806	40.875	41.011	40.149	37.717	
PR = 1.4578	MACH-BAR	0.184	0.410	0.490	0.484	0.465	0.444	0.405	
TR = 1.1395	EFF-POLY	0.755	0.820	0.826	0.745	0.707	0.752	0.673	
EFF-A = 0.8173	INCID-M	14.2	2.9	1.1	-2.2	-0.3	2.7	4.1	
EFF-P = 0.8249	DEVIATION	18.2	14.7	13.3	13.5	15.0	16.6	17.9	
	OMEGA-BAR	0.242	0.127	0.099	0.141	0.166	0.128	0.168	
	LOSS PAR	0.081	0.044	0.037	0.055	0.067	0.054	0.072	
	D-FACTOR	0.978	0.613	0.519	0.509	0.526	0.530	0.568	
	TURNING	50.9	39.5	37.6	34.5	36.9	41.7	43.9	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 44)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 1.398	P-STATIC	9.484	9.485	9.488	9.495	9.506	9.519	9.528	
NCOR= 3568.0	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.615	-4.222	-5.774	-7.288	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	103.987	103.946	103.862	103.092	102.232	101.076	100.376	
	VZ-BAR	103.987	103.946	103.862	103.092	102.232	101.076	100.376	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.308	0.306	0.307	0.306	0.303	0.300	0.297	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.103	10.105	10.112	10.125	10.126	10.125	10.123	10.119
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.240	9.241	9.247	9.256	9.266	9.277	9.283	
	BETABAR	7.872	9.808	11.404	12.341	11.955	9.718	5.702	
	EPSILON	-0.000	-0.879	-2.547	-4.135	-5.753	-7.282	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	120.740	120.776	120.853	121.090	120.385	119.484	118.968	
	VZ-BAR	119.603	119.009	118.467	118.292	117.774	117.764	118.379	
	V-THET-BAR	16.536	20.572	23.895	25.881	24.937	20.169	11.821	
	MACH-BAR	0.359	0.359	0.360	0.360	0.358	0.355	0.354	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.2	-4.0	-3.7	-4.2	-5.9	-9.5	-14.2	
	OMEGABAR	0.044	0.041	0.030	0.010	0.009	0.011	0.013	
	TURNING	-7.9	-9.8	-11.4	-12.3	-12.0	-9.7	-5.7	
ROTOR LEADING EDGE	DIAMETER	0.1270	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.103	10.105	10.112	10.125	10.126	10.125	10.123	10.119
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 1.400	P-STATIC	8.695	8.701	8.701	8.702	8.707	8.711	8.708	
NCOR= 3568.0	BETABAR	6.086	7.064	8.990	9.797	9.529	7.755	4.563	
	EPSILON	-1.170	-1.146	-2.769	-4.690	-6.574	-7.348	-8.037	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	155.851	155.812	156.002	156.613	156.347	156.031	156.136	
	VZ-BAR	154.973	154.219	154.085	154.329	154.190	154.601	155.635	
	V-THET-BAR	16.522	20.753	24.378	26.649	25.884	21.054	12.421	
	MACH-BAR	0.466	0.467	0.468	0.470	0.469	0.468	0.469	
	U-WHEEL	227.566	234.340	247.869	261.437	274.986	288.535	295.309	
	V-BAR-PR	261.832	263.445	271.477	280.969	292.963	308.948	322.875	
	BETABAR-PR	53.710	54.169	55.418	56.662	58.242	59.971	61.182	
	V-THET-B-P	-211.044	-213.586	-223.511	-234.788	-249.103	-267.481	-282.888	
	MACH-BAR-P	0.786	0.791	0.815	0.843	0.879	0.927	0.969	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.779	14.944	15.599	15.638	15.361	14.916	14.650	15.317
ROTOR	T-TOTAL	326.06	327.76	328.30	326.12	328.16	331.42	333.69	328.26
	P-STATIC	10.941	11.081	11.374	11.629	11.827	12.013	12.105	
PR = 1.5136	BETABAR	72.028	55.767	52.561	49.418	53.215	59.807	64.238	
TR = 1.4391	EPSILON	-2.865	-1.688	-2.500	-4.280	-6.024	-6.673	-6.918	
EFF-A = 0.9066	K-BAR	0.985	0.985	0.985	0.985	0.984	0.985	0.985	
EFF-P = 0.9092	V-BAR	204.989	232.128	238.568	230.578	217.825	199.788	188.613	
	VZ-BAR	63.251	130.628	145.022	149.999	130.442	100.503	81.978	
	V-THET-BAR	194.986	191.786	189.422	175.119	174.432	172.632	169.805	
	MACH-BAR	0.583	0.668	0.667	0.664	0.623	0.565	0.529	
	U-WHEEL	224.893	231.490	244.685	257.880	271.075	284.271	290.868	
	V-BAR-PR	69.965	136.529	155.214	171.326	162.368	150.296	146.156	
	BETABAR-PR	25.308	16.911	20.849	28.886	36.545	48.019	55.883	
	V-THET-B-P	-29.907	-39.703	-55.263	-82.762	-96.644	-111.659	-121.003	
	MACH-BAR-P	0.199	0.393	0.447	0.494	0.464	0.425	0.410	
	D-FACTOR	0.970	0.714	0.657	0.601	0.659	0.731	0.764	
	TURNING	26.4	37.3	34.6	27.8	21.7	12.0	5.3	
	INCID-M	-3.7	-2.0	0.1	1.1	1.4	1.3	1.4	
	DEVIATION	37.2	26.7	12.2	11.2	11.4	10.8	22.0	
	OMEGABAR-P	0.397	0.168	0.064	-0.004	0.091	0.220	0.492	
	LOSS PAR	0.126	0.058	0.023	-0.001	0.031	0.065	0.073	
	PT-RATIO	1.364	1.479	1.543	1.544	1.517	1.473	1.447	1.5136
	EFF-AD	0.670	0.862	0.947	1.004	0.911	0.780	0.705	0.9066
	EFF-POLY	0.883	0.870	0.950	1.004	0.916	0.792	0.720	0.9092
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.779	14.923	15.593	15.642	15.375	14.927	14.650	15.317
	T-TOTAL	328.08	327.69	328.35	326.15	328.06	331.34	333.69	328.26
	P-STATIC	10.954	11.068	11.303	11.540	11.725	11.897	11.987	
	BETABAR	72.705	55.933	52.183	48.903	52.202	58.238	62.304	
	EPSILON	-0.113	-1.064	-2.710	-4.053	-4.770	-6.458	-7.979	
	K-BAR	0.985	0.985	0.985	0.985	0.985	0.985	0.985	
	V-BAR	204.509	232.023	240.707	233.521	221.595	204.302	193.232	
	VZ-BAR	60.799	130.015	147.583	153.501	135.816	107.605	89.812	
	V-THET-BAR	195.261	192.066	190.149	175.980	175.085	173.736	171.092	
	MACH-BAR	0.582	0.667	0.694	0.674	0.634	0.579	0.543	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.181	14.434	15.106	14.963	14.723	14.518	14.206	14.755
ROTOR PLUS STATOR	T-TOTAL	328.08	327.69	328.38	326.20	327.75	330.96	333.69	328.26
	P-STATIC	12.921	12.930	12.935	12.915	12.888	12.858	12.840	
PR = 1.4581	BETABAR	19.167	15.976	14.223	13.734	14.158	14.746	15.138	
TR = 1.1391	EPSILON	0.450	-0.243	-1.450	-2.332	-2.990	-4.210	-5.489	
EFF-A = 0.8178	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8272	V-BAR	61.160	142.331	169.104	164.291	156.750	150.554	138.141	
	VZ-BAR	57.770	136.845	163.920	159.594	151.989	145.595	133.347	
IGV,ROTOR,STATOR	V-THET-BAR	20.079	39.128	41.548	39.004	38.340	38.320	36.074	
	MACH-BAR	0.169	0.399	0.476	0.463	0.440	0.420	0.383	
	EFF-POLY	0.788	0.823	0.807	0.714	0.702	0.764	0.690	
PR = 1.4563	INCID-M	17.0	3.3	1.4	-1.6	0.7	4.6	7.5	
TR = 1.1391	DEVIATION	18.4	14.7	13.3	13.4	14.8	16.7	18.1	
EFF-A = 0.8171	OMEGA-BAR	0.212	0.127	0.114	0.166	0.179	0.135	0.167	
EFF-P = 0.8246	LOSS PAR	0.071	0.044	0.042	0.064	0.072	0.056	0.071	
	D-FACTOR	1.005	0.626	0.534	0.533	0.553	0.558	0.599	
	TURNING	53.5	40.0	36.0	35.2	38.0	43.5	47.2	

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Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 45)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
NCOR= 1.370	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
RCOR= 3040.4	P-STATIC	9.525	9.526	9.529	9.536	9.546	9.559	9.567	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.594	-4.225	-5.784	-7.315	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	100.560	100.516	100.231	99.666	98.818	97.691	97.015	
	VZ-BAR	100.560	100.516	100.231	99.666	98.818	97.691	97.015	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.298	0.298	0.297	0.295	0.293	0.289	0.287	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.104	10.106	10.113	10.126	10.127	10.126	10.124	10.120
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.280	9.281	9.287	9.295	9.305	9.315	9.321	
	BETABAR	7.455	9.825	11.682	12.154	11.975	9.880	5.649	
	EPSILON	-0.000	-0.904	-2.566	-4.186	-5.757	-7.313	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	117.916	117.953	118.032	118.261	117.612	116.745	116.251	
	VZ-BAR	116.919	116.219	115.587	115.611	115.052	115.009	115.686	
	V-THET-BAR	15.299	20.127	23.898	24.899	24.402	20.031	11.443	
	MACH-BAR	0.351	0.351	0.351	0.352	0.350	0.347	0.346	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.6	-3.9	-3.5	-4.8	-5.9	-9.4	-16.3	
	OMEGABAR	0.045	0.042	0.030	0.009	0.008	0.010	0.012	
	TURNING	-7.5	-9.8	-11.7	-12.2	-12.0	-9.9	-5.6	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.104	10.106	10.114	10.126	10.127	10.126	10.124	10.120
NCOR= 1.371	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
RCOR= 3040.4	P-STATIC	8.761	8.767	8.773	8.776	8.779	8.779	8.777	
	BETABAR	5.770	7.697	9.243	9.696	9.586	7.903	4.533	
	EPSILON	-1.170	-1.788	-3.088	-4.412	-5.661	-6.895	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	152.065	151.828	151.841	152.277	152.155	152.071	152.146	
	VZ-BAR	151.295	150.457	149.869	150.102	150.031	150.623	151.670	
	V-THET-BAR	15.287	20.335	24.389	25.647	25.339	20.910	12.025	
	MACH-BAR	0.456	0.455	0.455	0.457	0.456	0.456	0.456	
	U-WHEEL	193.917	199.690	211.235	222.781	238.326	245.871	251.644	
	V-BAR-PR	238.092	234.106	239.526	247.775	257.265	270.733	283.586	
	BETABAR-PR	49.736	50.007	51.266	52.713	54.325	56.194	57.668	
	V-THET-B-P	-178.630	-179.355	-186.846	-197.133	-208.987	-224.962	-239.619	
	MACH-BAR-P	0.702	0.702	0.718	0.743	0.771	0.812	0.850	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.272	13.445	13.659	13.652	13.600	13.311	13.090	13.527
ROTOR	T-TOTAL	315.26	315.00	315.69	314.73	315.84	317.10	317.91	315.71
------	P-STATIC	10.034	10.101	10.262	10.425	10.568	10.703	10.769	
PR = 1.3367	BETABAR	45.544	44.883	44.874	42.946	44.061	45.850	45.474	
TR = 1.0956	EPSILON	-2.886	-2.626	-3.114	-4.340	-5.483	-6.302	-6.418	
EFF-A = 0.9065	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
EFF-P = 0.9083	V-BAR	220.525	222.818	223.071	216.517	210.049	196.137	186.126	
	VZ-BAR	158.447	157.878	158.079	158.489	150.941	136.618	130.518	
	V-THET-BAR	157.409	157.233	157.389	147.515	146.070	140.731	132.695	
	MACH-BAR	0.645	0.652	0.652	0.633	0.611	0.567	0.535	
	U-WHEEL	191.639	197.261	208.505	219.749	230.994	242.238	247.860	
	V-BAR-PR	158.195	162.876	166.151	174.186	173.198	170.205	174.063	
	BETABAR-PR	12.497	14.225	17.916	24.500	29.365	36.612	41.424	
	V-THET-B-P	-34.231	-40.028	-51.116	-72.234	-84.923	-101.506	-115.165	
	MACH-BAR-P	0.463	0.477	0.486	0.509	0.504	0.492	0.501	
	D-FACTOR	0.535	0.513	0.516	0.492	0.523	0.565	0.575	
	TURNING	37.2	35.8	33.4	28.2	25.0	19.6	16.2	
	INCID-M	-7.7	-6.1	-4.0	-2.8	-2.6	-2.4	-2.1	
	DEVIATION	24.4	18.0	9.3	6.8	4.2	5.4	7.6	
	OMEGABAR-P	0.145	0.091	0.063	0.031	0.077	0.166	0.218	
	LOSS PAR	0.050	0.032	0.023	0.011	0.028	0.059	0.073	
	PT-RATIO	1.313	1.330	1.351	1.348	1.343	1.315	1.293	1.3367
	EFF-AD	0.862	0.913	0.939	0.967	0.916	0.810	0.738	0.9065
	EFF-POLY	0.867	0.916	0.941	0.968	0.919	0.817	0.747	0.9083
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.272	13.441	13.657	13.652	13.603	13.314	13.090	13.527
	T-TOTAL	315.26	315.00	315.70	314.74	315.81	317.09	317.91	315.71
	P-STATIC	10.079	10.099	10.189	10.305	10.434	10.570	10.635	
	BETABAR	46.080	44.973	44.393	42.111	42.996	44.660	44.175	
	EPSILON	-0.113	-0.884	-2.615	-3.865	-5.206	-6.979	-7.979	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	218.839	222.803	225.684	220.952	215.197	201.614	191.794	
	VZ-BAR	151.799	157.622	161.263	163.911	157.396	143.408	137.557	
	V-THET-BAR	157.631	157.467	157.882	148.165	146.750	141.712	133.652	
	MACH-BAR	0.639	0.652	0.661	0.647	0.627	0.584	0.553	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.411	12.892	13.415	13.438	13.331	12.882	12.502	13.188
ROTOR PLUS STATOR	T-TOTAL	315.26	315.00	315.71	314.74	315.81	317.10	317.91	315.71
----------	P-STATIC	11.285	11.293	11.296	11.276	11.243	11.199	11.174	
PR = 1.3032	BETABAR	16.932	15.360	12.672	12.149	12.772	12.108	10.659	
TR = 1.0956	EPSILON	0.450	0.068	-1.225	-2.537	-3.691	-4.958	-5.489	
EFF-A = 0.8223	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8289	V-BAR	130.311	153.155	174.369	175.800	173.606	158.058	142.014	
	VZ-BAR	124.662	147.690	170.122	171.863	169.311	154.541	139.563	
	V-THET-BAR	37.951	40.527	38.248	36.997	38.379	33.155	26.267	
IGV,ROTOR,STATOR	MACH-BAR	0.371	0.439	0.502	0.507	0.499	0.452	0.404	
----------	EFF-POLY	0.626	0.727	0.850	0.849	0.786	0.635	0.517	
PR = 1.3017	INCID-M	-9.6	-7.7	-6.4	-8.4	-8.5	-9.0	-10.6	
TR = 1.0956	DEVIATION	16.2	14.1	11.8	11.8	13.4	14.1	13.6	
EFF-A = 0.8206	OMEGA-BAR	0.270	0.164	0.070	0.064	0.086	0.157	0.240	
EFF-P = 0.8253	LOSS PAR	0.092	0.058	0.026	0.025	0.035	0.067	0.104	
	D-FACTOR	0.598	0.503	0.431	0.407	0.406	0.453	0.511	
	TURNING	29.1	29.6	31.7	30.0	30.2	32.6	33.5	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 46)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.333	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 3035.6	P-STATIC	9.587	9.587	9.551	9.557	9.567	9.579	9.587	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.594	-4.225	-5.784	-7.315	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	98.726	98.680	98.403	97.848	97.016	95.912	95.249	
	VZ-BAR	98.726	98.680	98.403	97.848	97.016	95.912	95.249	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.293	0.292	0.292	0.290	0.287	0.284	0.282	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.106	10.108	10.115	10.127	10.128	10.127	10.126	10.121
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.329	9.330	9.336	9.344	9.352	9.363	9.368	
	BETABAR	7.788	9.987	11.872	12.151	12.121	9.919	5.417	
	EPSILON	-0.000	-0.904	-2.566	-4.186	-5.757	-7.313	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	114.386	114.413	114.501	114.719	114.108	113.274	112.793	
	VZ-BAR	113.331	112.675	112.051	112.149	111.564	111.576	112.290	
	V-THET-BAR	15.500	19.841	23.556	24.147	23.960	19.512	10.649	
	MACH-BAR	0.340	0.340	0.340	0.341	0.339	0.337	0.335	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.3	-3.8	-3.3	-4.4	-5.8	-9.3	-14.5	
	OMEGABAR	0.043	0.040	0.029	0.008	0.007	0.009	0.011	
	TURNING	-7.8	-10.0	-11.9	-12.2	-12.1	-9.9	-5.4	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.106	10.108	10.115	10.127	10.127	10.127	10.126	10.121
WCOR= 1.334	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 3035.6	P-STATIC	8.846	8.851	8.857	8.860	8.863	8.863	8.861	
	BETABAR	6.046	7.847	9.422	9.728	9.736	7.959	4.361	
	EPSILON	-1.170	-1.771	-3.004	-4.396	-5.677	-6.495	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	147.041	146.800	146.819	147.265	147.151	147.071	147.144	
	VZ-BAR	146.223	145.423	144.838	145.149	145.032	145.651	146.718	
	V-THET-BAR	15.488	20.041	24.036	24.874	24.883	20.363	11.190	
	MACH-BAR	0.440	0.440	0.440	0.441	0.440	0.440	0.441	
	U-WHEEL	193.610	199.373	210.900	222.428	233.955	245.482	251.245	
	V-BAR-PR	230.453	230.886	236.425	245.145	254.452	268.130	281.341	
	BETABAR-PR	50.617	50.961	52.220	53.693	55.250	57.096	58.567	
	V-THET-B-P	-178.122	-179.332	-186.864	-197.553	-209.071	-225.118	-240.056	
	MACH-BAR-P	0.690	0.691	0.708	0.734	0.762	0.803	0.842	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.363	13.417	13.718	13.714	13.650	13.374	13.231	13.575
ROTOR	T-TOTAL	315.34	315.27	315.74	314.77	316.03	317.31	317.82	315.85
PR = 1.3412	P-STATIC	10.225	10.295	10.468	10.630	10.773	10.910	10.978	
TR = 1.0961	BETABAR	47.132	47.529	46.458	44.283	46.027	48.080	46.315	
EFF-A = 0.9130	EPSILON	-2.886	-2.610	-3.185	-4.309	-5.509	-6.297	-6.418	
EFF-P = 0.9145	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	215.945	214.855	217.153	210.691	203.777	189.809	182.090	
	VZ-BAR	186.910	185.073	189.591	150.835	141.487	126.809	125.769	
	V-THET-BAR	150.271	158.482	157.407	147.104	146.648	141.234	131.678	
	MACH-BAR	0.630	0.627	0.634	0.614	0.591	0.547	0.523	
	U-WHEEL	191.336	196.948	208.175	219.401	230.628	241.854	247.467	
	V-BAR-PR	150.585	150.090	157.984	167.278	164.540	161.885	170.953	
	BETABAR-PR	12.684	14.850	18.740	25.607	30.693	38.430	42.634	
	V-THET-B-P	-33.065	-38.466	-50.768	-72.297	-83.980	-100.620	-115.789	
	MACH-BAR-P	0.439	0.438	0.461	0.488	0.478	0.467	0.491	
	D-FACTOR	0.562	0.564	0.584	0.516	0.553	0.594	0.583	
	TURNING	37.9	36.1	33.5	28.1	24.6	18.7	15.9	
	INCID-R	-6.8	-5.2	-3.1	-1.9	-1.6	-1.5	-1.2	
	DEVIATION	24.5	18.6	10.1	7.9	5.5	7.2	8.8	
	OMEGABAR-P	0.129	0.112	0.052	0.019	0.074	0.163	0.193	
	LOSS PAR	0.044	0.039	0.019	0.007	0.027	0.056	0.064	
	PT-RATIO	1.322	1.327	1.356	1.354	1.348	1.321	1.307	1.3412
	EFF-AD	0.882	0.897	0.951	0.981	0.921	0.818	0.772	0.9130
	EFF-POLY	0.886	0.900	0.953	0.981	0.924	0.825	0.780	0.9145
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.363	13.415	13.714	13.715	13.654	13.376	13.231	13.575
	T-TOTAL	315.34	315.26	315.75	314.77	316.00	317.30	317.82	315.85
	P-STATIC	10.269	10.298	10.401	10.526	10.651	10.787	10.849	
	BETABAR	47.701	47.681	46.011	43.505	44.949	46.853	44.987	
	EPSILON	-0.113	-0.926	-2.453	-3.856	-5.033	-6.966	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	214.284	214.657	219.518	214.604	208.514	196.981	187.607	
	VZ-BAR	144.212	144.518	152.455	155.655	147.574	133.315	132.688	
	V-THET-BAR	158.494	158.719	157.935	147.738	147.306	142.229	132.628	
	MACH-BAR	0.625	0.626	0.641	0.627	0.606	0.563	0.540	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.633	12.972	13.469	13.500	13.375	13.013	12.745	13.266
ROTOR PLUS STATOR	T-TOTAL	315.34	315.26	315.76	314.77	315.98	317.30	317.82	315.85
PR = 1.3107	P-STATIC	11.500	11.506	11.509	11.490	11.460	11.420	11.396	
TR = 1.0961	BETABAR	16.598	15.302	12.952	12.208	12.958	12.401	11.227	
EFF-A = 0.8366	EPSILON	0.450	0.001	-1.272	-2.504	-3.674	-4.901	-5.489	
EFF-P = 0.8427	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	129.563	145.965	166.971	168.715	165.573	152.808	141.706	
	VZ-BAR	124.764	140.795	162.723	164.899	161.357	149.282	138.995	
	V-THET-BAR	37.009	38.494	37.421	35.677	37.125	32.817	27.589	
IGV,ROTOR,STATOR	MACH-BAR	0.369	0.417	0.479	0.485	0.475	0.436	0.403	
	EFF-POLY	0.668	0.767	0.886	0.846	0.779	0.673	0.567	
PR = 1.3093	INCID-R	-8.0	-5.0	-4.8	-7.0	-6.6	-6.8	-9.8	
TR = 1.0961	DEVIATION	15.8	14.0	12.1	11.8	13.6	14.4	14.2	
EFF-A = 0.8353	OMEGA-BAR	0.236	0.142	0.074	0.067	0.093	0.140	0.204	
EFF-P = 0.8396	LOSS PAR	0.080	0.050	0.027	0.026	0.038	0.059	0.088	
	D-FACTOR	0.596	0.523	0.450	0.424	0.429	0.463	0.496	
	TURNING	31.1	32.4	33.1	31.3	32.0	34.5	33.8	

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Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 47)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
NCOR= 1.306	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 3054.6	P-STATIC	9.572	9.572	9.575	9.581	9.591	9.603	9.610	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.908	-2.620	-4.238	-5.790	-7.292	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	96.580	96.537	96.261	95.716	94.895	93.815	93.160	
	VZ-BAR	96.580	96.537	96.261	95.716	94.895	93.815	93.160	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.286	0.286	0.285	0.283	0.281	0.278	0.276	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1418	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.107	10.109	10.116	10.127	10.128	10.127	10.126	10.122
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.381	9.383	9.388	9.395	9.403	9.413	9.417	
	BETABAR	8.642	10.113	11.691	12.178	12.030	10.020	6.519	
	EPSILON	-0.000	-0.899	-2.564	-4.183	-5.747	-7.288	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	110.461	110.452	110.550	110.811	110.225	109.454	109.005	
	VZ-BAR	109.207	108.734	108.256	108.318	107.804	107.781	108.300	
	V-THET-BAR	16.598	19.393	22.401	23.376	22.973	19.044	12.376	
	MACH-BAR	0.328	0.328	0.328	0.329	0.327	0.325	0.324	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.4	-3.7	-3.4	-4.3	-5.9	-9.2	-13.4	
	OMEGABAR	0.043	0.040	0.028	0.008	0.006	0.008	0.010	
	TURNING	-8.6	-10.1	-11.7	-12.2	-12.0	-10.0	-6.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.107	10.109	10.116	10.127	10.128	10.127	10.126	10.122
NCOR= 1.308	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 3054.6	P-STATIC	8.935	8.940	8.945	8.948	8.951	8.952	8.950	
	BETABAR	6.729	7.958	9.301	9.772	9.690	8.075	5.266	
	EPSILON	-1.170	-1.709	-3.025	-4.522	-5.852	-6.622	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	141.550	141.311	141.399	141.830	141.701	141.615	141.685	
	VZ-BAR	140.575	139.949	139.540	139.772	139.679	140.208	141.087	
	V-THET-BAR	16.585	19.563	22.853	24.072	23.850	19.891	13.004	
	MACH-BAR	0.423	0.422	0.423	0.424	0.424	0.423	0.424	
	U-WHEEL	194.819	200.618	212.217	223.816	235.415	247.015	252.814	
	V-BAR-PR	226.999	228.838	235.225	243.792	253.517	266.917	278.234	
	BETABAR-PR	51.737	52.297	53.613	55.017	56.566	58.311	59.530	
	V-THET-B-P	-178.234	-181.055	-189.364	-199.745	-211.566	-227.124	-239.810	
	MACH-BAR-P	0.679	0.684	0.703	0.729	0.758	0.798	0.832	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.383	13.483	13.801	13.724	13.702	13.473	13.282	13.636
ROTOR	T-TOTAL	315.48	315.43	315.35	314.47	316.04	317.89	317.93	315.83
	P-STATIC	10.419	10.493	10.661	10.816	10.955	11.091	11.158	
PR = 1.3472	BETABAR	49.581	48.978	46.333	45.017	46.924	50.023	49.152	
TR = 1.0960	EPSILON	-2.885	-2.469	-3.102	-4.326	-5.554	-6.358	-6.418	
EFF-A = 0.9287	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.9290	V-BAR	209.187	209.312	212.237	203.844	198.277	185.795	176.147	
	VZ-BAR	135.630	137.383	146.539	144.098	135.416	119.369	115.211	
	V-THET-BAR	159.260	157.918	153.523	144.181	144.830	142.376	133.245	
	MACH-BAR	0.609	0.609	0.619	0.593	0.574	0.534	0.505	
	U-WHEEL	192.530	198.178	209.475	220.771	232.068	243.364	249.012	
	V-BAR-PR	139.651	143.168	156.872	163.199	161.087	156.358	163.327	
	BETABAR-PR	13.783	16.329	20.891	27.990	32.792	40.231	45.138	
	V-THET-B-P	-33.271	-40.264	-55.951	-76.590	-87.238	-100.988	-115.767	
	MACH-BAR-P	0.406	0.417	0.457	0.475	0.467	0.450	0.468	
	D-FACTOR	0.603	0.590	0.582	0.527	0.564	0.616	0.605	
	TURNING	38.0	36.0	32.7	27.0	23.8	18.1	14.4	
	INCID-M	-5.7	-3.8	-1.7	-0.5	-0.3	-0.3	-0.2	
	DEVIATION	25.6	20.1	12.3	10.3	7.6	9.0	11.3	
	OMEGABAR-P	0.133	0.103	0.017	0.006	0.064	0.162	0.190	
	LOSS PAR	0.045	0.036	0.006	0.002	0.022	0.054	0.060	
	PT-RATIO	1.324	1.334	1.364	1.355	1.353	1.330	1.312	1.3472
	EFF-AD	0.882	0.907	0.984	0.994	0.933	0.824	0.781	0.9287
	EFF-POLY	0.886	0.910	0.984	0.994	0.935	0.831	0.788	0.9290
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.383	13.480	13.798	13.726	13.704	13.476	13.282	13.636
	T-TOTAL	315.48	315.43	315.37	314.47	315.98	317.88	317.93	315.83
	P-STATIC	10.442	10.484	10.598	10.721	10.849	10.986	11.050	
	BETABAR	49.973	49.020	45.914	44.244	45.920	48.900	47.914	
	EPSILON	-0.113	-0.947	-2.385	-3.988	-5.332	-6.903	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	208.276	209.536	214.490	207.514	202.839	190.263	180.839	
	VZ-BAR	133.954	137.413	149.225	148.659	140.831	125.078	121.207	
	V-THET-BAR	159.485	158.181	154.065	144.785	145.421	143.376	134.207	
	MACH-BAR	0.606	0.610	0.626	0.605	0.587	0.548	0.519	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.725	13.092	13.589	13.539	13.408	13.044	12.826	13.326
ROTOR PLUS STATOR	T-TOTAL	315.48	315.43	315.38	314.46	315.93	317.87	317.93	315.83
	P-STATIC	11.716	11.720	11.718	11.700	11.673	11.641	11.624	
PR = 1.3165	BETABAR	17.302	15.738	13.000	12.296	13.235	13.326	12.382	
TR = 1.0960	EPSILON	0.450	-0.038	-1.280	-2.431	-3.549	-4.838	-5.489	
EFF-A = 0.8515	K-BAR	0.925	0.925	0.925	0.925	0.925	0.925	0.925	
EFF-P = 0.8572	V-BAR	121.583	140.345	160.461	160.637	156.939	142.910	133.090	
	VZ-BAR	116.081	135.090	156.349	156.952	152.771	139.062	129.994	
	V-THET-BAR	36.159	38.031	36.091	34.208	35.928	32.939	28.538	
IGV,ROTOR,STATOR	MACH-BAR	0.345	0.400	0.460	0.461	0.449	0.406	0.378	
	EFF-POLY	0.694	0.791	0.844	0.863	0.774	0.640	0.591	
PR = 1.3753	INCID-M	-5.7	-3.6	-4.9	-6.3	-5.6	-4.7	-6.9	
TR = 1.0960	DEVIATION	16.5	14.4	12.1	11.9	13.9	15.3	15.3	
EFF-A = 0.8517	OMEGA-BAR	0.224	0.130	0.078	0.062	0.104	0.173	0.204	
EFF-P = 0.8543	LOSS PAR	0.076	0.045	0.029	0.024	0.042	0.073	0.088	
	D-FACTOR	0.626	0.538	0.463	0.441	0.453	0.505	0.527	
	TURNING	32.7	33.3	32.9	31.9	32.7	35.6	35.5	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 48)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
NCOR= 1.266	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3046.1	P-STATIC	9.608	9.609	9.612	9.617	9.626	9.637	9.644	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.623	-4.224	-5.782	-7.295	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	93.286	93.243	92.980	92.472	91.700	90.664	90.039	
	VZ-BAR	93.286	93.243	92.980	92.472	91.700	90.664	90.039	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.276	0.276	0.275	0.274	0.271	0.268	0.266	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.109	10.110	10.117	10.128	10.129	10.128	10.127	10.123
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.416	9.418	9.422	9.429	9.437	9.446	9.451	
	BETABAR	7.723	9.707	11.687	12.331	12.087	9.886	5.786	
	EPSILON	-0.000	-0.910	-2.561	-4.159	-5.729	-7.291	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	107.799	107.815	107.944	108.180	107.610	106.852	106.398	
	VZ-BAR	106.821	106.269	105.706	105.685	105.225	105.261	105.855	
	V-THET-BAR	14.487	18.179	21.865	23.104	22.534	18.346	10.727	
	MACH-BAR	0.320	0.320	0.320	0.321	0.319	0.317	0.316	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.4	-4.1	-3.5	-4.2	-5.8	-9.4	-14.1	
	OMEGABAR	0.043	0.040	0.028	0.008	0.006	0.007	0.009	
	TURNING	-7.7	-9.7	-11.7	-12.3	-12.1	-9.9	-5.8	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.109	10.110	10.117	10.128	10.129	10.128	10.127	10.123
NCOR= 1.267	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3046.1	P-STATIC	8.993	8.997	9.002	9.006	9.009	9.011	9.009	
	BETABAR	6.022	7.652	9.317	9.913	9.759	7.983	4.687	
	EPSILON	-1.170	-1.749	-3.190	-4.778	-6.039	-6.654	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	137.980	137.764	137.842	138.204	138.013	137.896	137.951	
	VZ-BAR	137.219	136.535	136.024	136.341	136.016	136.557	137.490	
	V-THET-BAR	14.476	18.343	22.315	23.793	23.394	19.151	11.272	
	MACH-BAR	0.412	0.412	0.412	0.413	0.412	0.412	0.412	
	U-WHEEL	194.278	200.067	211.628	223.195	234.762	246.329	252.112	
	V-BAR-PR	226.181	227.295	233.114	241.446	251.351	265.062	277.322	
	BETABAR-PR	52.650	53.080	54.302	55.676	57.238	58.988	60.279	
	V-THET-B-P	-179.802	-181.718	-189.312	-199.402	-211.368	-227.178	-240.880	
	MACH-BAR-P	0.676	0.679	0.696	0.721	0.751	0.792	0.828	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.363	13.608	13.884	13.741	13.613	13.426	13.302	13.651
ROTOR	T-TOTAL	315.83	315.55	315.70	314.37	315.76	317.29	318.28	315.74
	P-STATIC	10.493	10.569	10.742	10.896	11.032	11.161	11.224	
PR = 1.3485	BETABAR	50.742	48.635	47.119	45.632	48.265	50.344	49.938	
TR = 1.0957	EPSILON	-2.885	-2.532	-3.271	-4.582	-5.707	-6.456	-6.418	
EFF-A = 0.9348	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.9348	V-BAR	205.780	210.143	211.745	201.238	192.301	181.058	174.061	
	VZ-BAR	130.219	138.876	144.084	140.718	128.014	115.547	112.029	
	V-THET-BAR	159.337	157.708	155.162	143.858	143.500	139.395	133.218	
	MACH-BAR	0.598	0.612	0.617	0.585	0.556	0.521	0.499	
	U-WHEEL	191.996	197.628	208.893	220.158	231.423	242.688	248.321	
	V-BAR-PR	134.252	144.504	153.792	160.085	155.300	154.987	160.621	
	BETABAR-PR	14.079	16.032	20.447	28.467	34.483	41.795	45.776	
	V-THET-B-P	-32.659	-39.920	-53.731	-76.300	-87.923	-103.293	-115.103	
	MACH-BAR-P	0.390	0.421	0.448	0.466	0.449	0.446	0.460	
	D-FACTOR	0.629	0.583	0.555	0.535	0.583	0.615	0.616	
	TURNING	38.6	37.0	33.9	27.2	22.8	17.2	14.5	
	INCID-M	-4.7	-3.0	-1.0	0.1	0.3	0.3	0.5	
	DEVIATION	25.9	19.8	11.8	10.8	9.3	10.6	11.9	
	OMEGABAR-P	0.154	0.076	0.010	-0.002	0.075	0.155	0.197	
	LOSS PAR	0.052	0.026	0.004	-0.001	0.026	0.051	0.062	
	PT-RATIO	1.322	1.346	1.372	1.357	1.344	1.326	1.314	1.3485
	EFF-AD	0.865	0.933	0.991	1.002	0.921	0.830	0.776	0.9348
	EFF-POLY	0.870	0.935	0.991	1.001	0.924	0.837	0.784	0.9348
STATOR LEADING EDGE	DIAMETPR	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.363	13.603	13.883	13.746	13.616	13.428	13.302	13.651
	T-TOTAL	315.83	315.55	315.72	314.39	315.71	317.28	318.28	315.74
	P-STATIC	10.512	10.558	10.680	10.810	10.935	11.062	11.123	
	BETABAR	51.096	48.657	46.685	44.918	47.250	49.241	48.743	
	EPSILON	-0.113	-0.989	-2.657	-3.977	-5.359	-6.903	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	205.039	210.423	213.980	204.703	196.259	185.304	178.487	
	VZ-BAR	128.767	139.003	146.790	144.953	133.221	120.982	117.702	
	V-THET-BAR	159.562	157.966	155.689	144.541	144.114	140.360	134.179	
	MACH-BAR	0.596	0.613	0.624	0.596	0.568	0.533	0.512	
STATOR TRAILING EDGE	DIAMETPR	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.816	13.186	13.592	13.466	13.311	13.051	12.897	13.317
ROTOR PLUS STATOR	T-TOTAL	315.83	315.56	315.74	314.40	315.66	317.26	318.28	315.74
	P-STATIC	11.762	11.769	11.771	11.751	11.723	11.690	11.672	
PR = 1.3155	BETABAR	17.210	15.892	13.498	12.407	12.885	13.070	12.069	
TR = 1.0957	EPSILON	0.450	-0.074	-1.265	-2.399	-3.461	-4.785	-5.489	
EFF-A = 0.8517	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8574	V-BAR	123.962	142.262	159.813	155.250	150.350	140.499	134.047	
	VZ-BAR	118.412	136.829	155.398	151.624	146.565	136.892	131.085	
	V-THET-BAR	36.677	38.930	37.300	33.356	33.526	31.630	28.027	
IGV,ROTOR,STATOR	MACH-BAR	0.352	0.406	0.458	0.445	0.430	0.400	0.380	
	EFF-POLY	0.728	0.776	0.818	0.800	0.758	0.661	0.608	
PR = 1.3144	INCID-M	-4.6	-4.0	-4.1	-5.6	-4.3	-4.4	-6.0	
TR = 1.0957	DEVIATION	16.4	14.6	12.6	12.0	13.5	15.0	15.0	
EFF-A = 0.8515	OMEGA-BAR	0.192	0.137	0.091	0.095	0.114	0.159	0.186	
EFF-P = 0.8547	LOSS PAR	0.065	0.048	0.034	0.037	0.046	0.067	0.080	
	D-FACTOR	0.608	0.529	0.465	0.461	0.471	0.500	0.516	
	TURNING	33.9	32.8	33.2	32.5	34.4	36.2	36.7	

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Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 49)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.228	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3042.9	P-STATIC	9.641	9.641	9.644	9.649	9.657	9.668	9.674	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.611	-4.218	-5.766	-7.290	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	90.277	90.241	89.996	89.505	88.760	87.759	87.155	
	VZ-BAR	90.277	90.241	89.996	89.505	88.760	87.759	87.155	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.267	0.267	0.266	0.265	0.263	0.260	0.258	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.111	10.112	10.116	10.120	10.129	10.129	10.126	10.124
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.477	9.478	9.482	9.489	9.496	9.505	9.509	
	BETABAR	7.667	9.926	11.712	12.215	11.843	9.937	6.496	
	EPSILON	-0.000	-0.679	-2.542	-4.159	-5.710	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	103.020	103.021	103.132	103.370	102.826	102.112	101.669	
	VZ-BAR	102.049	101.476	100.985	101.030	100.637	100.578	101.016	
	V-THET-BAR	13.744	17.758	20.935	21.871	21.103	17.621	11.502	
	MACH-BAR	0.305	0.305	0.306	0.307	0.305	0.303	0.301	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.4	-3.8	-3.4	-4.3	-6.0	-9.3	-13.4	
	OMEGABAR	0.042	0.040	0.028	0.007	0.005	0.006	0.008	
	TURNING	-7.7	-9.9	-11.7	-12.2	-11.8	-9.9	-6.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.111	10.112	10.116	10.120	10.129	10.129	10.126	10.124
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 1.229	P-STATIC	9.092	9.097	9.101	9.105	9.111	9.114	9.112	
NCOR= 3042.9	BETABAR	5.994	7.846	9.356	9.546	9.598	8.065	5.285	
	EPSILON	-1.170	-1.731	-3.392	-5.145	-6.605	-7.018	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	131.510	131.300	131.388	131.694	131.387	131.177	131.223	
	VZ-BAR	130.791	130.068	129.640	129.755	129.548	129.878	130.665	
	V-THET-BAR	13.734	17.922	21.359	22.519	21.907	16.403	12.086	
	MACH-BAR	0.392	0.392	0.392	0.393	0.392	0.391	0.391	
	U-WHEEL	194.078	199.855	211.410	222.965	234.520	246.074	251.852	
	V-BAR-PR	222.779	223.646	230.057	238.779	248.973	262.113	273.059	
	BETABAR-PR	54.649	54.438	55.700	57.083	58.645	60.296	61.411	
	V-THET-B-P	-180.344	-181.433	-190.051	-200.446	-212.613	-227.671	-239.766	
	MACH-BAR-P	0.664	0.667	0.686	0.712	0.743	0.782	0.814	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.282	13.719	13.926	13.689	13.569	13.307	13.261	13.644
ROTOR	T-TOTAL	316.26	315.93	315.95	314.19	315.57	317.87	318.94	315.87
-----	P-STATIC	10.468	10.572	10.750	10.898	11.017	11.137	11.199	
PR = 1.3477	BETABAR	52.243	46.314	47.011	45.332	47.586	52.367	51.941	
TR = 1.0961	EPSILON	-2.885	-2.520	-3.325	-4.878	-6.159	-6.627	-6.416	
EFF-A = 0.9288	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
EFF-P = 0.9288	V-BAR	203.628	213.387	212.745	199.523	191.384	177.936	173.828	
	VZ-BAR	124.684	141.903	145.060	140.265	129.088	108.649	107.161	
	V-THET-BAR	160.991	159.353	155.621	141.899	141.280	140.913	136.868	
	MACH-BAR	0.591	0.622	0.614	0.580	0.554	0.511	0.497	
	U-WHEEL	191.798	197.424	208.677	219.931	231.184	242.436	248.065	
	V-BAR-PR	128.433	146.924	154.472	160.512	157.326	148.714	154.428	
	BETABAR-PR	13.879	15.012	20.089	29.088	34.863	43.056	46.059	
	V-THET-B-P	-30.867	-58.071	-53.056	-78.032	-89.904	-101.525	-111.197	
	MACH-BAR-P	0.373	0.428	0.450	0.467	0.455	0.427	0.442	
	D-FACTOR	0.653	0.569	0.549	0.528	0.571	0.639	0.638	
	TURNING	40.2	34.4	35.6	28.0	23.8	17.2	15.4	
	INCID-M	-3.3	-1.7	0.4	1.5	1.8	1.7	1.6	
	DEVIATION	25.7	18.8	11.5	11.4	9.7	11.8	12.2	
	OMEGABAR-P	0.199	0.064	0.010	0.004	0.080	0.200	0.229	
	LOSS PAR	0.066	0.022	0.004	0.002	0.028	0.064	0.071	
	PT-RATIO	1.314	1.357	1.376	1.352	1.340	1.314	1.309	1.3477
	EFF-AD	0.832	0.946	0.991	0.996	0.917	0.787	0.750	0.9288
	EFF-POLY	0.818	0.947	0.991	0.995	0.919	0.795	0.759	0.9288
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.282	13.712	13.928	13.695	13.576	13.309	13.261	13.644
	T-TOTAL	316.26	315.94	315.97	314.21	315.52	317.85	318.94	315.87
	P-STATIC	10.510	10.561	10.686	10.818	10.933	11.046	11.107	
	BETABAR	52.676	48.375	46.544	44.673	46.671	51.228	50.745	
	EPSILON	-0.113	-1.115	-2.868	-4.172	-5.485	-6.746	-7.979	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	202.729	213.572	215.137	202.815	195.005	181.954	177.903	
	VZ-BAR	122.913	141.873	147.970	144.229	133.811	113.944	112.451	
	V-THET-BAR	161.218	159.621	156.168	142.590	141.840	141.858	137.856	
	MACH-BAR	0.588	0.622	0.627	0.590	0.565	0.523	0.510	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.851	13.241	13.604	13.406	13.224	12.932	12.854	13.280
ROTOR PLUS STATOR	T-TOTAL	316.26	315.94	315.99	314.27	315.37	317.76	318.94	315.87
----------	P-STATIC	11.618	11.824	11.825	11.805	11.779	11.750	11.736	
PR = 1.3118	BETABAR	16.907	16.214	13.516	12.443	12.985	12.743	11.057	
TR = 1.0961	EPSILON	0.450	-0.145	-1.199	-2.231	-3.161	-4.596	-5.489	
EFF-A = 0.8385	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8446	V-BAR	122.621	142.032	157.867	150.169	143.540	131.319	130.406	
	VZ-BAR	117.271	136.367	153.493	146.642	139.869	128.084	127.985	
	V-THET-BAR	36.825	39.638	36.893	32.357	32.253	28.966	25.011	
IGV,ROTOR,STATOR	MACH-BAR	0.348	0.405	0.452	0.430	0.410	0.373	0.369	
----------	EFF-POLY	0.779	0.762	0.809	0.798	0.750	0.689	0.661	
PR = 1.3108	INCID-M	-3.0	-4.3	-4.3	-5.8	-4.8	-2.4	-4.0	
TR = 1.0961	DEVIATION	16.2	14.9	12.6	12.1	13.6	14.7	14.0	
EFF-A = 0.8392	OMEGA-BAR	0.126	0.149	0.100	0.100	0.133	0.166	0.176	
EFF-P = 0.8422	LOSS PAR	0.053	0.052	0.037	0.039	0.054	0.070	0.074	
	D-FACTOR	0.614	0.539	0.479	0.480	0.501	0.552	0.556	
	TURNING	35.7	32.2	33.0	32.2	33.7	38.5	39.7	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 50)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.188	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3051.5	P-STATIC	9.674	9.674	9.677	9.682	9.689	9.699	9.705	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.611	-4.218	-5.766	-7.240	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	87.120	87.086	86.849	86.377	85.659	84.699	84.118	
	VZ-BAR	87.120	87.086	86.849	86.377	85.659	84.699	84.118	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.258	0.258	0.257	0.255	0.253	0.250	0.249	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.112	10.113	10.119	10.126	10.129	10.129	10.126	10.124
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.523	9.523	9.527	9.533	9.540	9.548	9.552	
	BETABAR	7.947	9.981	11.591	12.152	11.929	9.696	5.982	
	EPSILON	-0.000	-0.879	-2.542	-4.159	-5.710	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	99.300	99.296	99.407	99.645	99.130	98.441	98.025	
	VZ-BAR	98.346	97.791	97.380	97.413	96.989	97.031	97.491	
	V-THET-BAR	13.728	17.210	19.973	20.975	20.490	16.579	10.215	
	MACH-BAR	0.294	0.294	0.295	0.295	0.294	0.292	0.290	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.1	-3.8	-3.5	-4.4	-6.0	-9.5	-13.9	
	OMEGABAR	.0.042	0.040	0.028	0.007	0.005	0.005	0.007	
	TURNING	-7.9	-10.0	-11.6	-12.2	-11.9	-9.7	-6.0	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.112	10.113	10.119	10.128	10.129	10.129	10.128	10.124
WCOR= 1.189	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3051.5	P-STATIC	9.167	9.171	9.175	9.179	9.185	9.188	9.187	
	BETABAR	6.226	7.904	9.277	9.816	9.689	7.689	4.860	
	EPSILON	-1.170	-1.631	-3.343	-5.251	-6.671	-7.333	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	126.465	126.268	126.397	126.712	126.369	126.107	126.166	
	VZ-BAR	125.739	125.067	124.743	124.857	124.566	124.911	125.711	
	V-THET-BAR	13.717	17.363	20.376	21.603	21.268	17.309	10.734	
	MACH-BAR	0.377	0.376	0.377	0.378	0.376	0.376	0.376	
	U-WHEEL	194.625	200.419	212.006	223.594	235.181	246.769	252.564	
	V-BAR-PR	220.313	221.701	220.656	237.466	247.540	261.257	272.552	
	BETABAR-PR	55.199	55.658	56.937	58.278	59.786	61.436	62.533	
	V-THET-B-P	-180.908	-183.056	-191.630	-201.991	-213.913	-229.460	-241.829	
	MACH-BAR-P	0.656	0.660	0.681	0.706	0.737	0.778	0.812	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.170	13.724	14.116	13.856	13.698	13.299	13.201	13.751
ROTOR	T-TOTAL	316.69	316.59	316.94	315.34	316.42	318.41	319.63	316.69
PR = 1.3583	P-STATIC	10.570	10.659	10.851	11.014	11.142	11.261	11.322	
TR = 1.0990	BETABAR	55.616	50.171	47.758	46.704	48.963	55.101	56.178	
EFF-A = 0.9259	EPSILON	-2.865	-2.406	-3.259	-4.905	-6.393	-6.776	-6.418	
EFF-P = 0.9268	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	196.845	210.460	214.714	200.529	190.816	172.310	166.025	
	VZ-BAR	110.626	134.813	144.343	137.518	125.289	98.598	92.412	
	V-THET-BAR	162.819	161.563	158.956	145.947	143.906	141.302	137.929	
	MACH-BAR	0.569	0.612	0.625	0.582	0.551	0.493	0.473	
	U-WHEEL	192.339	197.981	209.266	220.551	231.837	243.122	248.765	
	V-BAR-PR	114.497	139.641	152.871	156.458	153.089	141.778	144.307	
	BETABAR-PR	14.941	15.103	19.214	28.480	35.071	45.924	50.180	
	V-THET-B-P	-29.520	-36.398	-50.310	-74.605	-87.929	-101.820	-110.836	
	MACH-BAR-P	0.331	0.406	0.445	0.454	0.442	0.406	0.412	
	D-FACTOR	0.716	0.603	0.560	0.551	0.592	0.668	0.678	
	TURNING	40.3	40.6	37.7	29.8	24.7	15.5	12.4	
	INCID-M	-2.2	-0.5	1.7	2.7	2.9	2.8	2.8	
	DEVIATION	26.8	18.8	10.6	10.6	9.9	14.7	16.5	
	OMEGABAR-P	0.253	0.092	0.001	0.007	0.080	0.218	0.262	
	LOSS PAR	0.086	0.032	0.000	0.002	0.028	0.067	0.075	
	PT-RATIO	1.302	1.357	1.395	1.368	1.352	1.313	1.303	1.3583
	EFF-AD	0.793	0.925	1.000	0.994	0.919	0.772	0.721	0.9259
	EFF-POLY	0.800	0.928	0.999	0.993	0.922	0.780	0.730	0.9268
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.170	13.717	14.116	13.860	13.708	13.303	13.201	13.751
	T-TOTAL	316.69	316.58	316.95	315.33	316.37	318.38	319.63	316.69
	P-STATIC	10.567	10.649	10.793	10.944	11.062	11.173	11.232	
	BETABAR	56.220	50.240	47.365	46.115	48.647	53.759	54.727	
	EPSILON	-0.113	-1.437	-3.086	-4.593	-5.205	-6.715	-7.979	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	196.165	210.632	216.792	203.333	194.362	176.379	170.165	
	VZ-BAR	109.069	134.733	146.838	140.953	129.941	104.282	98.266	
	V-THET-BAR	163.049	161.864	159.490	146.548	144.527	142.241	138.924	
	MACH-BAR	0.567	0.612	0.631	0.591	0.562	0.505	0.486	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.784	13.270	13.681	13.440	13.237	12.937	12.832	13.311
ROTOR PLUS STATOR	T-TOTAL	316.69	316.58	316.96	315.39	316.23	318.22	319.63	316.69
PR = 1.3148	P-STATIC	11.914	11.921	11.921	11.899	11.874	11.847	11.833	
TR = 1.0990	BETABAR	16.778	15.623	13.724	12.918	12.891	12.360	11.038	
EFF-A = 0.8215	EPSILON	0.450	-0.251	-1.333	-2.207	-3.071	-4.410	-5.489	
EFF-P = 0.8283	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	112.598	138.359	156.761	147.184	139.371	126.035	121.233	
	VZ-BAR	107.604	133.253	152.285	143.459	135.858	123.113	118.990	
	V-THET-BAR	32.503	37.235	37.189	32.905	31.093	26.979	23.212	
IGV,ROTOR,STATOR	MACH-BAR	0.319	0.394	0.448	0.421	0.397	0.357	0.342	
	EFF-POLY	0.798	0.772	0.759	0.726	0.678	0.690	0.647	
PR = 1.3138	INCID-M	0.6	-2.4	-3.5	-4.4	-3.5	0.1	-0.1	
TR = 1.0990	DEVIATION	16.0	14.3	12.8	12.6	13.5	14.3	14.0	
EFF-A = 0.8214	OMEGA-BAR	0.156	0.146	0.131	0.144	0.178	0.172	0.187	
EFF-P = 0.8261	LOSS PAR	0.051	0.051	0.048	0.056	0.072	0.073	0.081	
	D-FACTOR	0.662	0.559	0.493	0.503	0.530	0.575	0.593	
	TURNING	39.4	34.6	33.6	33.2	35.2	41.4	43.7	

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Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 51)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.156	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3049.0	P-STATIC	9.699	9.700	9.702	9.707	9.714	9.723	9.728	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.596	-4.198	-5.764	-7.288	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	84.638	84.664	84.375	83.922	83.227	82.300	81.734	
	VZ-BAR	84.638	84.664	84.375	83.922	83.227	82.300	81.734	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.250	0.250	0.249	0.248	0.246	0.243	0.242	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.113	10.114	10.120	10.128	10.129	10.129	10.129	10.125
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.566	9.567	9.561	9.567	9.574	9.581	9.585	
	BETABAR	8.341	9.964	11.565	12.638	11.910	9.678	6.078	
	EPSILON	-0.000	-0.879	-2.530	-4.136	-5.698	-7.282	-8.116	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	96.447	96.401	96.497	96.731	96.230	95.570	95.172	
	VZ-BAR	95.386	94.939	94.537	94.604	94.158	94.207	94.667	
	V-THET-BAR	13.985	16.712	19.345	20.174	19.859	16.066	10.077	
	MACH-BAR	0.286	0.286	0.286	0.287	0.285	0.283	0.282	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-5.8	-5.6	-4.5	-6.0	-9.6	-13.6	
	OMEGABAR	0.042	0.040	0.028	0.009	0.005	0.005	0.007	
	TURNING	-8.3	-10.0	-11.6	-12.6	-11.9	-9.7	-6.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.113	10.114	10.120	10.128	10.129	10.129	10.129	10.125
WCOR= 1.157	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3049.0	P-STATIC	9.224	9.228	9.231	9.234	9.240	9.244	9.242	
	BETABAR	6.547	7.918	9.270	9.738	9.688	7.891	4.968	
	EPSILON	-1.170	-1.480	-3.237	-5.340	-7.215	-7.776	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	122.564	122.351	122.525	122.652	122.496	122.192	122.276	
	VZ-BAR	121.765	121.164	120.925	121.082	120.749	121.032	121.817	
	V-THET-BAR	13.974	16.854	19.736	20.779	20.614	16.774	10.569	
	MACH-BAR	0.362	0.364	0.365	0.366	0.365	0.364	0.364	
	U-WHEEL	194.465	200.253	211.832	223.410	234.988	246.566	252.355	
	V-BAR-PR	217.124	219.821	226.989	236.052	246.043	254.718	270.721	
	BETABAR-PR	55.995	56.544	57.869	59.139	60.668	62.223	63.258	
	V-THET-B-P	-180.492	-183.470	-192.095	-202.631	-214.374	229.792	-241.766	
	MACH-BAR-P	0.648	0.654	0.676	0.703	0.732	0.773	0.806	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.039	13.645	14.163	13.929	13.755	13.361	13.150	13.785
ROTOR	T-TOTAL	317.67	316.67	317.19	315.83	317.01	318.96	320.44	317.06
	P-STATIC	10.633	10.723	10.922	11.088	11.215	11.333	11.394	
PR = 1.3615	BETABAR	60.449	51.786	48.363	47.493	50.184	57.614	61.976	
TR = 1.1003	EPSILON	-2.885	-2.118	-3.281	-4.904	-6.626	-6.893	-6.416	
EFF-A = 0.9217	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.9226	V-BAR	189.676	205.689	213.526	200.083	189.934	169.210	159.696	
	VZ-BAR	93.646	127.263	141.866	135.193	121.625	90.672	75.119	
	V-THET-BAR	165.176	161.521	159.584	147.499	145.874	142.611	141.145	
	MACH-BAR	0.548	0.597	0.621	0.580	0.548	0.484	0.455	
	U-WHEEL	192.180	197.818	209.094	220.370	231.646	242.922	248.560	
	V-BAR-PR	97.461	132.336	150.268	153.591	148.846	135.171	131.675	
	BETABAR-PR	16.066	15.913	19.235	28.326	35.260	47.860	55.034	
	V-THET-B-P	-27.004	-36.291	-49.510	-72.871	-85.772	-102.110	-107.415	
	MACH-BAR-P	0.281	0.384	0.437	0.445	0.429	0.386	0.373	
	D-FACTOR	0.794	0.635	0.571	0.565	0.612	0.696	0.750	
	TURNING	39.9	40.6	38.6	30.8	25.4	14.4	8.2	
	INCID-M	-1.4	0.4	2.5	3.6	3.7	3.6	3.5	
	DEVIATION	27.9	19.7	10.6	10.7	10.0	16.6	21.2	
	OMEGABAR-P	0.312	0.121	-0.001	0.008	0.088	0.235	0.301	
	LOSS PAR	0.115	0.042	-0.000	0.003	0.030	0.069	0.077	
	PT-RATIO	1.289	1.349	1.399	1.375	1.358	1.313	1.296	1.3615
	EFF-AD	0.751	0.903	1.001	0.993	0.913	0.758	0.688	0.9217
	EFF-POLY	0.754	0.907	1.001	0.993	0.916	0.766	0.696	0.9226
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.039	13.633	14.161	13.934	13.766	13.369	13.130	13.785
	T-TOTAL	317.67	316.67	317.20	315.82	316.96	318.91	320.44	317.06
	P-STATIC	10.634	10.713	10.868	11.021	11.141	11.255	11.316	
	BETABAR	60.716	51.905	47.995	46.908	49.300	56.186	60.330	
	EPSILON	-0.113	-1.416	-2.789	-4.433	-5.043	-6.591	-7.979	
	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
	V-BAR	189.642	205.760	215.445	202.770	193.245	173.055	163.616	
	VZ-BAR	92.755	126.951	144.173	138.528	126.020	96.336	80.991	
	V-THET-BAR	165.410	161.796	160.094	148.073	146.489	143.716	142.164	
	MACH-BAR	0.547	0.597	0.627	0.588	0.558	0.495	0.466	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.664	13.252	13.682	13.466	13.262	12.975	12.808	13.325
ROTOR PLUS STATOR	T-TOTAL	317.67	316.67	317.20	315.86	316.74	318.64	320.44	317.06
	P-STATIC	11.978	11.985	11.983	11.962	11.938	11.913	11.900	
PR = 1.3161	BETABAR	16.244	15.003	13.447	12.693	12.569	12.201	11.356	
TR = 1.1003	EPSILON	0.450	-0.422	-1.408	-2.082	-2.739	-4.149	-5.469	
EFF-A = 0.8141	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.8212	V-BAR	100.312	133.989	153.902	145.309	137.227	124.201	115.654	
	VZ-BAR	96.308	129.428	149.683	141.758	133.939	121.395	113.390	
	V-THET-BAR	28.060	34.655	35.789	31.928	29.862	26.251	22.774	
IGV,ROTOR,STATOR	MACH-BAR	0.283	0.381	0.439	0.415	0.390	0.351	0.326	
	EFF-POLY	0.802	0.797	0.738	0.702	0.663	0.716	0.669	
PR = 1.3152	INCID-M	5.1	-0.7	-2.8	-3.6	-2.2	-.6	5.5	
TR = 1.1003	DEVIATION	15.5	13.7	12.6	12.3	13.2	14.2	14.3	
EFF-A = 0.8143	OMEGA-BAR	0.196	0.131	0.146	0.161	0.192	0.163	0.177	
EFF-P = 0.8192	LOSS PAR	0.053	0.046	0.054	0.062	0.078	0.069	0.077	
	D-FACTOR	0.728	0.575	0.507	0.516	0.546	0.585	0.621	
	TURNING	44.5	36.9	34.5	34.2	36.7	44.0	49.0	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 52)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.122	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3050.4	P-STATIC	9.726	9.726	9.728	9.732	9.738	9.747	9.752	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.593	-4.197	-5.743	-7.288	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	81.967	81.934	81.726	81.310	80.678	79.815	79.285	
	VZ-BAR	81.967	81.934	81.726	81.310	80.678	79.815	79.285	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.242	0.242	0.241	0.240	0.238	0.236	0.234	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.114	10.115	10.120	10.129	10.129	10.129	10.129	10.125
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.592	9.593	9.597	9.602	9.609	9.616	9.619	
	BETABAR	7.410	9.656	11.514	12.092	11.885	9.066	5.516	
	EPSILON	-0.000	-0.879	-2.529	-4.128	-5.698	-7.282	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	93.278	93.280	93.370	93.592	93.097	92.464	92.102	
	VZ-BAR	92.449	91.955	91.491	91.516	91.101	91.306	91.676	
	V-THET-BAR	12.030	15.649	18.637	19.605	19.173	14.569	8.854	
	MACH-BAR	0.276	0.276	0.276	0.277	0.276	0.274	0.273	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.7	-4.1	-3.6	-4.4	-6.0	-10.2	-14.4	
	OMEGABAR	0.042	0.040	0.028	0.007	0.005	0.005	0.006	
	TURNING	-7.4	-9.7	-11.5	-12.1	-11.9	-9.1	-5.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.114	10.115	10.120	10.129	10.129	10.129	10.129	10.125
WCOR= 1.123	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3050.4	P-STATIC	9.263	9.287	9.288	9.291	9.297	9.302	9.300	
	BETABAR	5.828	7.682	9.243	9.794	9.674	7.401	4.516	
	EPSILON	-1.170	-1.331	-3.187	-5.421	-7.431	-8.143	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	118.375	118.170	118.386	118.728	118.363	118.041	118.153	
	VZ-BAR	117.763	117.107	116.849	116.998	116.679	117.055	117.786	
	V-THET-BAR	12.020	15.795	19.015	20.196	19.890	15.205	9.304	
	MACH-BAR	0.352	0.351	0.352	0.353	0.352	0.351	0.351	
	U-WHEEL	194.552	202.343	211.926	223.509	235.093	246.676	252.467	
	V-BAR-PR	217.223	218.569	225.541	234.575	244.799	254.386	258.189	
	BETABAR-PR	57.171	57.602	58.795	60.081	61.533	63.173	64.155	
	V-THET-B-P	-162.532	-184.548	-192.911	-203.313	-215.202	-231.470	-243.164	
	MACH-BAR-P	0.646	0.650	0.671	0.698	0.728	0.771	0.804	
ROTOR TRAILING EDGE	DIAMETER	0.1281	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.887	13.548	14.197	14.024	13.605	13.323	13.019	13.819
ROTOR	T-TOTAL	317.47	316.97	317.73	316.72	318.08	319.93	321.31	317.79
	P-STATIC	10.679	10.775	10.982	11.154	11.287	11.408	11.468	
PR = 1.3648	BETABAR	64.862	53.687	49.398	48.761	52.187	60.309	70.976	
TR = 1.1028	EPSILON	-2.665	-2.113	-3.180	-4.983	-6.695	-7.004	-6.418	
EFF-A = 0.9066	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.9081	V-BAR	182.603	200.765	212.489	200.736	189.014	166.875	151.566	
	VZ-BAR	77.744	116.943	138.288	132.328	119.886	82.727	49.404	
	V-THET-BAR	165.226	161.665	161.332	150.943	149.315	144.619	143.268	
	MACH-BAR	0.525	0.581	0.617	0.581	0.544	0.476	0.429	
	U-WHEEL	192.266	197.906	209.187	220.468	231.749	243.030	248.671	
	V-BAR-PR	82.313	124.343	146.343	149.492	142.228	128.587	116.388	
	BETABAR-PR	19.179	16.953	19.085	27.719	35.431	49.954	64.862	
	V-THET-B-P	-27.041	-36.241	-47.855	-69.525	-82.434	-98.212	-105.382	
	MACH-BAR-P	0.237	0.360	0.425	0.433	0.409	0.367	0.330	
	D-FACTOR	0.866	0.670	0.589	0.587	0.645	0.728	0.790	
	TURNING	38.0	40.6	39.7	32.4	26.1	13.2	-0.7	
	INCID-M	-0.2	1.5	3.5	4.5	4.6	4.5	4.4	
	DEVIATION	31.0	20.7	10.5	10.0	10.2	18.7	31.0	
	OMEGABAR-P	0.374	0.162	0.012	0.018	0.113	0.259	0.348	
	LOSS PAR	0.124	0.056	0.004	0.006	0.039	0.073	0.066	
	PT-RATIO	1.274	1.339	1.403	1.385	1.363	1.315	1.265	1.3646
	EFF-AD	0.765	0.872	0.990	0.984	0.892	0.739	0.647	0.9066
	EFF-POLY	0.715	0.877	0.990	0.984	0.896	0.749	0.659	0.9081
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.887	13.539	14.192	14.031	13.818	13.339	13.019	13.819
	T-TOTAL	317.47	316.96	317.73	316.70	318.01	319.87	321.31	317.79
	P-STATIC	10.692	10.767	10.932	11.092	11.227	11.350	11.412	
	BETABAR	65.353	53.828	49.071	48.176	51.435	59.039	69.186	
	EPSILON	-0.113	-1.609	-3.131	-4.034	-5.043	-6.450	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	182.044	200.794	214.181	203.290	191.800	170.124	154.399	
	VZ-BAR	75.916	118.556	140.314	135.563	119.575	87.589	54.865	
	V-THET-BAR	165.459	161.948	161.818	151.490	149.953	145.741	144.323	
	MACH-BAR	0.523	0.581	0.622	0.589	0.553	0.486	0.438	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.640	13.237	13.644	13.473	13.268	13.006	12.712	13.323
ROTOR PLUS STATOR	T-TOTAL	317.47	316.97	317.73	316.73	317.75	319.55	321.31	317.79
	P-STATIC	12.019	12.025	12.021	12.000	11.976	11.951	11.939	
PR = 1.3159	BETABAR	15.955	13.911	12.900	11.415	11.372	11.658	11.341	
TR = 1.1028	EPSILON	0.450	-0.493	-1.383	-2.025	-2.592	-3.872	-5.489	
EFF-A = 0.7937	K-BAR	0.874	0.874	0.874	0.874	0.874	0.874	0.874	
EFF-P = 0.8015	V-BAR	95.498	131.076	150.621	143.884	135.698	123.792	107.126	
	VZ-BAR	91.819	127.240	146.820	141.037	133.034	121.239	105.034	
	V-THET-BAR	26.251	31.471	33.626	28.478	26.757	25.015	21.066	
IGV,ROTOR,STATOR	MACH-BAR	0.269	0.372	0.429	0.410	0.385	0.350	0.301	
	EFF-POLY	0.857	0.829	0.706	0.657	0.630	0.703	0.653	
PR = 1.3150	INCID-M	9.7	1.2	-1.8	-2.3	-0.1	5.4	14.4	
TR = 1.1028	DEVIATION	15.2	12.6	12.0	11.1	12.0	13.6	14.3	
EFF-A = 0.7941	OMEGA-BAR	0.112	0.109	0.168	0.190	0.212	0.167	0.191	
EFF-P = 0.7997	LOSS PAR	0.038	0.038	0.062	0.074	0.086	0.071	0.083	
	D-FACTOR	0.746	0.587	0.526	0.538	0.566	0.592	0.664	
	TURNING	49.4	39.9	36.2	36.8	40.1	47.4	57.8	

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Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 53)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.113	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2570.9	P-STATIC	9.733	9.733	9.735	9.739	9.745	9.754	9.758	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.625	-4.245	-5.796	-7.295	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	81.260	81.227	81.008	80.582	79.937	79.079	78.558	
	VZ-BAR	81.260	81.227	81.008	80.582	79.937	79.079	78.558	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.240	0.240	0.239	0.238	0.236	0.234	0.232	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1418	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.115	10.116	10.120	10.129	10.129	10.129	10.129	10.125
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.589	9.590	9.594	9.599	9.605	9.611	9.615	
	BETABAR	7.567	10.035	11.662	12.116	12.120	10.025	6.542	
	EPSILON	-0.000	-0.910	-2.573	-4.190	-5.759	-7.291	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	93.575	93.578	93.663	93.902	93.443	92.835	92.479	
	VZ-BAR	92.760	92.143	91.729	91.810	91.360	91.415	91.877	
	V-THET-BAR	12.323	16.305	18.933	19.710	19.620	16.160	10.537	
	MACH-BAR	0.277	0.277	0.277	0.278	0.277	0.275	0.274	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.5	-3.7	-3.5	-4.4	-5.8	-9.2	-13.4	
	OMEGABAR	0.042	0.039	0.028	0.007	0.005	0.005	0.006	
	TURNING	-7.6	-10.0	-11.7	-12.1	-12.1	-10.0	-6.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.115	10.116	10.121	10.129	10.129	10.129	10.129	10.125
WCOR= 1.113	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2570.9	P-STATIC	9.280	9.283	9.287	9.290	9.292	9.292	9.291	
	BETABAR	5.957	7.987	9.380	9.836	9.876	8.172	5.348	
	EPSILON	-1.170	-1.793	-3.052	-4.433	-5.713	-6.551	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	118.648	118.447	118.473	118.843	118.757	118.723	118.790	
	VZ-BAR	118.008	117.295	116.889	117.096	116.997	117.515	118.272	
	V-THET-BAR	12.313	16.457	19.309	20.302	20.369	16.875	11.072	
	MACH-BAR	0.353	0.352	0.352	0.353	0.353	0.353	0.353	
	U-WHEEL	163.969	168.850	178.612	188.374	198.137	207.899	212.780	
	V-BAR-PR	192.160	192.307	197.588	204.842	212.814	224.278	233.826	
	BETABAR-PR	52.113	52.415	53.730	55.134	56.648	58.399	59.615	
	V-THET-B-P	-151.656	-152.393	-159.303	-168.072	-177.767	-191.024	-201.708	
	MACH-BAR-P	0.572	0.572	0.588	0.609	0.633	0.667	0.695	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.330	12.415	12.505	12.476	12.417	12.257	12.158	12.410
ROTOR	T-TOTAL	307.18	307.75	307.26	306.20	306.90	307.96	309.06	307.20
-----	P-STATIC	10.200	10.248	10.366	10.467	10.554	10.642	10.685	
PR = 1.2257	BETABAR	46.234	47.823	45.648	42.910	44.366	46.663	47.936	
TR = 1.0661	EPSILON	-2.885	-2.579	-3.154	-4.324	-5.453	-6.264	-6.418	
EFF-A = 0.9093	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.9091	V-BAR	180.397	181.580	179.504	173.520	167.272	156.453	149.968	
	VZ-BAR	124.784	121.917	125.477	127.090	119.582	107.372	100.472	
	V-THET-BAR	130.277	134.564	128.355	118.142	116.960	113.792	111.336	
	MACH-BAR	0.527	0.531	0.525	0.507	0.487	0.458	0.433	
	U-WHEEL	162.043	166.796	176.304	185.811	195.319	204.827	209.580	
	V-BAR-PR	128.763	126.108	134.385	143.993	142.974	140.771	140.523	
	BETABAR-PR	14.282	14.809	20.902	28.031	33.237	40.293	44.358	
	V-THET-B-P	-31.765	-32.232	-47.948	-67.669	-78.359	-91.034	-98.245	
	MACH-BAR-P	0.376	0.369	0.393	0.421	0.417	0.408	0.406	
	D-FACTOR	0.543	0.564	0.528	0.487	0.518	0.562	0.590	
	TURNING	37.8	37.6	32.8	27.1	23.4	18.1	15.3	
	INCID-M	-5.3	-3.7	-1.5	-0.4	-0.2	-0.2	-0.2	
	DEVIATION	26.1	18.5	12.3	10.4	8.0	9.1	10.5	
	OMEGABAR-P	0.126	0.124	0.061	0.017	0.069	0.156	0.217	
	LOSS PAR	0.043	0.043	0.022	0.006	0.024	0.052	0.070	
	PT-RATIO	1.219	1.227	1.236	1.232	1.226	1.210	1.200	1.2257
	EFF-AD	0.883	0.888	0.944	0.982	0.923	0.816	0.739	0.9093
	EFF-POLY	0.885	0.890	0.942	0.981	0.924	0.820	0.745	0.9091
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.330	12.414	12.505	12.478	12.419	12.259	12.158	12.410
	T-TOTAL	307.18	307.74	307.29	306.21	306.87	307.94	309.06	307.20
	P-STATIC	10.212	10.235	10.313	10.398	10.484	10.572	10.613	
	BETABAR	46.501	47.706	45.144	42.192	43.518	45.689	46.825	
	EPSILON	-0.113	-0.930	-2.379	-3.704	-5.343	-6.993	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	179.851	182.135	181.852	176.708	170.648	160.087	153.771	
	VZ-BAR	123.799	122.566	128.259	130.922	123.747	111.831	105.215	
	V-THET-BAR	130.461	134.725	128.908	118.680	117.502	114.589	112.139	
	MACH-BAR	0.526	0.532	0.532	0.517	0.498	0.465	0.445	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.742	12.052	12.340	12.332	12.265	11.987	11.784	12.191
ROTOR PLUS STATOR	T-TOTAL	307.18	307.72	307.30	306.21	306.86	307.95	309.06	307.20
----------	P-STATIC	10.977	10.982	10.982	10.968	10.946	10.917	10.901	
PR = 1.2047	BETABAR	15.726	14.566	12.309	11.607	12.377	12.406	11.249	
TR = 1.0661	EPSILON	0.450	-0.032	-1.355	-2.539	-3.675	-4.885	-5.489	
EFF-A = 0.8250	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8296	V-BAR	108.450	127.212	142.235	142.324	140.398	127.723	116.913	
	VZ-BAR	104.390	123.127	138.965	139.414	137.135	124.740	114.667	
	V-THET-BAR	29.393	31.970	30.319	28.634	30.092	27.439	22.806	
IGV,ROTOR,STATOR	MACH-BAR	0.312	0.367	0.411	0.413	0.406	0.368	0.335	
----------	EFF-POLY	0.596	0.705	0.823	0.817	0.775	0.587	0.461	
PR = 1.2033	INCID-M	-9.2	-4.9	-5.7	-8.3	-8.0	-7.9	-8.0	
TR = 1.0661	DEVIATION	14.9	13.3	11.4	11.2	13.0	14.4	14.2	
EFF-A = 0.8256	OMEGA-BAR	0.278	0.166	0.075	0.070	0.080	0.161	0.242	
EFF-P = 0.8268	LOSS PAR	0.095	0.058	0.028	0.027	0.032	0.068	0.105	
	D-FACTOR	0.596	0.506	0.426	0.400	0.393	0.442	0.501	
	TURNING	30.8	33.1	32.8	30.6	31.1	33.3	35.6	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 54)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 1.088	P-STATIC	9.744	9.748	9.746	9.750	9.756	9.764	9.769	
NCOR= 2561.8	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.592	-4.224	-5.770	-7.295	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	80.103	80.068	79.858	79.448	78.825	77.979	77.465	
	VZ-BAR	80.103	80.068	79.858	79.448	78.825	77.979	77.465	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.237	0.237	0.236	0.235	0.233	0.230	0.229	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.116	10.116	10.121	10.129	10.129	10.129	10.129	10.125
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.602	9.604	9.607	9.612	9.618	9.625	9.628	
	BETABAR	9.811	10.584	11.578	12.066	12.057	9.757	6.544	
	EPSILON	-0.000	-0.883	-2.555	-4.131	-5.726	-7.291	-8.118	
	K-BAR	0.930	0.930	0.930	0.930	0.929	0.929	0.930	
	V-BAR	92.454	92.421	92.467	92.684	92.216	91.611	91.280	
	VZ-BAR	91.107	90.860	90.586	90.637	90.182	90.283	90.685	
	V-THET-BAR	15.755	16.913	18.558	19.374	19.263	15.525	10.403	
	MACH-BAR	0.274	0.274	0.274	0.274	0.273	0.271	0.270	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-3.3	-3.2	-3.6	-4.4	-5.8	-9.5	-13.4	
	OMEGABAR	0.041	0.039	0.028	0.007	0.005	0.005	0.006	
	TURNING	-9.8	-10.5	-11.6	-12.1	-12.1	-9.8	-6.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.116	10.117	10.121	10.129	10.129	10.129	10.129	10.125
WCOR= 1.088	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2561.8	P-STATIC	9.301	9.305	9.309	9.311	9.314	9.315	9.314	
	BETABAR	7.725	8.383	9.321	9.799	9.830	7.964	5.357	
	EPSILON	-1.170	-1.793	-3.745	-4.581	-5.858	-6.668	-6.637	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	117.112	116.906	116.922	117.262	117.111	117.019	117.098	
	VZ-BAR	116.049	115.657	115.378	115.551	115.391	115.889	116.586	
	V-THET-BAR	15.742	17.043	18.936	19.958	19.993	16.212	10.931	
	MACH-BAR	0.348	0.348	0.348	0.349	0.348	0.348	0.348	
	U-WHEEL	163.388	168.251	177.979	187.707	197.435	207.162	212.026	
	V-BAR-PR	187.794	190.370	196.487	203.696	211.663	223.367	232.447	
	BETABAR-PR	51.833	52.588	54.040	55.439	56.963	58.745	59.897	
	V-THET-B-P	-147.646	-151.209	-159.042	-167.749	-177.441	-190.950	-201.095	
	MACH-BAR-P	0.558	0.566	0.584	0.606	0.629	0.664	0.691	
ROTOR TRAILING EDGE	DIAMETER	0.1267	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.401	12.464	12.541	12.483	12.409	12.267	12.107	12.428
ROTOR	T-TOTAL	307.39	307.75	307.15	306.13	306.86	308.00	309.03	307.17
PR = 1.2274	P-STATIC	10.287	10.334	10.453	10.551	10.631	10.709	10.750	
TR = 1.0659	BETABAR	48.994	49.025	46.260	43.923	45.644	47.744	50.675	
EFF-A = 0.9176	EPSILON	-2.885	-2.579	-3.092	-4.511	-5.716	-6.483	-6.418	
EFF-P = 0.9170	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	179.484	179.549	176.881	169.815	163.244	153.482	143.990	
	VZ-BAR	117.766	117.734	122.286	122.313	114.127	103.210	91.249	
	V-THET-BAR	135.446	135.559	127.795	117.799	116.720	113.596	111.386	
	MACH-BAR	0.524	0.524	0.517	0.496	0.475	0.445	0.416	
	U-WHEEL	161.468	166.205	175.679	185.153	194.627	204.101	208.838	
	V-BAR-PR	120.606	121.663	131.346	139.643	138.186	137.275	133.504	
	BETABAR-PR	12.460	14.587	21.374	28.838	34.319	41.248	46.883	
	V-THET-B-P	-26.022	-30.645	-47.884	-67.354	-77.907	-90.504	-97.452	
	MACH-BAR-P	0.352	0.355	0.384	0.408	0.402	0.398	0.385	
	D-FACTOR	0.579	0.583	0.540	0.506	0.539	0.577	0.618	
	TURNING	39.4	38.0	32.7	26.6	22.6	17.5	13.0	
	INCID-M	-5.6	-3.5	-1.2	-0.1	0.1	0.1	0.1	
	DEVIATION	24.3	18.3	12.8	11.2	9.1	10.0	13.0	
	OMEGABAR-P	0.115	0.108	0.042	0.012	0.070	0.156	0.232	
	LOSS PAR	0.039	0.037	0.015	0.004	0.024	0.051	0.071	
	PT-RATIO	1.226	1.232	1.239	1.232	1.225	1.211	1.195	1.2274
	EFF-AD	0.899	0.905	0.960	0.988	0.921	0.818	0.723	0.9176
	EFF-POLY	0.901	0.907	0.960	0.987	0.923	0.822	0.729	0.9170
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.401	12.462	12.541	12.485	12.411	12.271	12.107	12.428
	T-TOTAL	307.39	307.75	307.18	306.14	306.84	307.98	309.03	307.17
	P-STATIC	10.296	10.325	10.408	10.491	10.566	10.643	10.686	
	BETABAR	49.339	49.020	45.836	43.259	44.794	46.745	49.518	
	EPSILON	-0.113	-0.957	-2.686	-3.631	-4.978	-6.050	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	178.805	179.871	178.911	172.690	166.440	157.004	147.500	
	VZ-BAR	116.507	117.959	124.643	125.763	118.115	107.587	95.759	
	V-THET-BAR	135.637	135.789	128.340	118.345	117.263	114.348	112.190	
	MACH-BAR	0.522	0.525	0.523	0.505	0.485	0.455	0.426	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.849	12.117	12.361	12.333	12.251	12.015	11.791	12.210
ROTOR PLUS STATOR	T-TOTAL	307.39	307.74	307.20	306.14	306.82	307.97	309.03	307.17
	P-STATIC	11.058	11.063	11.063	11.049	11.030	11.005	10.990	
PR = 1.2059	BETABAR	15.825	14.998	12.519	11.516	12.361	12.046	10.803	
TR = 1.0659	EPSILON	0.450	-0.015	-1.295	-2.460	-3.618	-4.885	-5.489	
EFF-A = 0.8333	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8377	V-BAR	109.864	125.909	138.769	137.890	134.962	123.813	111.135	
	VZ-BAR	105.700	121.623	135.468	135.114	131.834	121.086	109.166	
	V-THET-BAR	29.959	32.565	30.078	27.529	28.890	25.881	20.830	
IGV,ROTOR,STATOR	MACH-BAR	0.316	0.363	0.401	0.399	0.390	0.356	0.319	
	EFF-POLY	0.610	0.710	0.804	0.807	0.769	0.613	0.514	
PR = 1.2052	INCID-M	-6.3	-3.6	-5.0	-7.3	-6.7	-6.9	-5.3	
TR = 1.0659	DEVIATION	15.0	13.7	11.6	11.2	13.0	14.0	13.7	
EFF-A = 0.8341	OMEGA-BAR	0.262	0.162	0.085	0.076	0.087	0.157	0.222	
EFF-P = 0.8350	LOSS PAR	0.089	0.057	0.031	0.030	0.035	0.066	0.096	
	D-FACTOR	0.595	0.509	0.435	0.413	0.413	0.460	0.525	
	TURNING	33.5	34.0	33.3	31.7	32.4	34.7	38.7	

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Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 55)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.062	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2547.2	P-STATIC	9.763	9.763	9.765	9.769	9.774	9.782	9.786	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.598	-4.218	-5.770	-7.288	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	78.111	78.078	77.882	77.477	76.864	76.045	75.544	
	VZ-BAR	78.111	78.078	77.882	77.477	76.864	76.045	75.544	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.231	0.231	0.230	0.229	0.227	0.225	0.223	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.116	10.117	10.121	10.129	10.129	10.129	10.129	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.651	9.652	9.655	9.660	9.665	9.671	9.674	
	BETABAR	7.285	9.868	11.703	12.066	12.088	9.632	6.423	
	EPSILON	-0.000	-0.910	-2.542	-4.159	-5.729	-7.282	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	87.962	87.985	88.044	88.262	87.812	87.240	86.939	
	VZ-BAR	87.252	86.679	86.213	86.312	85.865	86.007	86.394	
	V-THET-BAR	11.155	15.078	17.859	18.450	18.388	14.597	9.725	
	MACH-BAR	0.260	0.260	0.260	0.261	0.260	0.258	0.257	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.8	-3.9	-3.4	-4.8	-5.8	-9.6	-13.5	
	OMEGABAR	0.041	0.038	0.028	0.008	0.006	0.006	0.006	
	TURNING	-7.3	-9.9	-11.7	-12.1	-12.1	-9.6	-6.4	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.116	10.117	10.121	10.129	10.129	10.129	10.129	10.126
WCOR= 1.063	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2547.2	P-STATIC	9.379	9.382	9.386	9.389	9.392	9.393	9.392	
	BETABAR	5.749	7.875	9.436	9.824	9.878	7.882	5.271	
	EPSILON	-1.170	-1.934	-3.361	-4.777	-5.962	-6.744	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	111.267	111.103	111.097	111.404	111.245	111.147	111.229	
	VZ-BAR	110.707	110.052	109.594	109.770	109.595	110.095	110.759	
	V-THET-BAR	11.146	15.223	18.214	19.007	19.083	15.241	10.219	
	MACH-BAR	0.330	0.330	0.330	0.331	0.330	0.330	0.330	
	U-WHEEL	162.459	167.295	176.968	186.640	196.313	205.985	210.821	
	V-BAR-PR	187.488	187.717	192.909	200.377	208.379	220.238	229.148	
	BETABAR-PR	53.809	54.107	55.380	56.782	58.267	60.006	61.096	
	V-THET-B-P	-151.314	-152.073	-158.753	-167.633	-177.229	-190.744	-200.603	
	MACH-BAR-P	0.557	0.557	0.573	0.595	0.619	0.654	0.681	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.449	12.478	12.559	12.454	12.383	12.228	12.076	12.417
ROTOR	T-TOTAL	307.62	307.76	307.35	306.12	306.84	308.04	309.00	307.21
-----	P-STATIC	10.288	10.337	10.451	10.551	10.636	10.718	10.758	
PR = 1.2263	BETABAR	47.245	48.443	46.485	44.085	45.879	48.515	51.477	
TR = 1.0661	EPSILON	-2.886	-2.540	-3.391	-4.605	-5.734	-6.475	-6.418	
EFF-A = 0.9108	K-BAR	0.895	0.895	0.895	0.895	0.895	0.895	0.895	
EFF-P = 0.9106	V-BAR	180.998	179.941	177.717	168.669	161.905	151.241	142.005	
	VZ-BAR	122.874	119.367	122.361	121.155	112.716	100.108	88.444	
	V-THET-BAR	132.899	134.649	128.879	117.349	116.225	113.294	111.099	
	MACH-BAR	0.529	0.526	0.519	0.492	0.471	0.438	0.410	
	U-WHEEL	160.551	165.260	174.681	184.101	193.521	202.941	207.651	
	V-BAR-PR	125.946	123.232	130.666	138.337	136.675	134.450	130.938	
	BETABAR-PR	12.683	14.384	20.514	28.851	34.441	41.824	47.510	
	V-THET-B-P	-27.652	-30.611	-45.801	-66.752	-77.296	-89.647	-96.552	
	MACH-BAR-P	0.368	0.360	0.382	0.404	0.398	0.389	0.378	
	D-FACTOR	0.554	0.571	0.539	0.505	0.540	0.586	0.624	
	TURNING	41.1	39.7	34.9	27.9	23.8	18.2	13.6	
	INCID-M	-3.6	-2.0	0.1	1.2	1.4	1.4	1.3	
	DEVIATION	24.5	18.1	11.9	11.2	9.3	10.6	13.7	
	OMEGABAR-P	0.109	0.105	0.048	0.022	0.080	0.173	0.246	
	LOSS PAR	0.037	0.037	0.017	0.008	0.028	0.057	0.075	
	PT-RATIO	1.231	1.233	1.241	1.230	1.222	1.207	1.192	1.2263
	EFF-AD	0.906	0.909	0.956	0.977	0.912	0.802	0.713	0.9108
	EFF-POLY	0.908	0.911	0.957	0.977	0.914	0.807	0.720	0.9106
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.449	12.477	12.559	12.457	12.385	12.232	12.076	12.417
	T-TOTAL	307.62	307.76	307.37	306.14	306.82	308.02	309.00	307.21
	P-STATIC	10.301	10.327	10.409	10.493	10.572	10.650	10.691	
	BETABAR	47.536	48.373	46.107	43.438	45.025	47.401	50.153	
	EPSILON	-0.113	-0.892	-2.550	-3.965	-5.348	-6.498	-7.979	
	K-BAR	0.895	0.895	0.895	0.895	0.895	0.895	0.895	
	V-BAR	180.408	180.362	179.574	171.540	165.062	154.932	145.750	
	VZ-BAR	121.798	119.811	128.496	124.558	116.667	104.868	93.387	
	V-THET-BAR	133.087	134.818	129.406	117.945	116.764	114.046	111.901	
	MACH-BAR	0.527	0.527	0.525	0.501	0.481	0.449	0.421	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.940	12.145	12.345	12.284	12.196	11.977	11.793	12.184
ROTOR PLUS STATOR	T-TOTAL	307.62	307.75	307.41	306.15	306.80	308.01	309.00	307.21
----------	P-STATIC	11.076	11.081	11.081	11.067	11.047	11.021	11.007	
PR = 1.2033	BETABAR	17.407	15.798	12.724	11.471	12.201	11.865	10.858	
TR = 1.0661	EPSILON	0.450	0.059	-1.188	-2.809	-3.627	-4.873	-5.489	
EFF-A = 0.8215	K-BAR	0.915	0.915	0.915	0.915	0.915	0.915	0.915	
EFF-P = 0.8261	V-BAR	134.545	126.405	136.993	134.366	131.077	120.506	110.063	
	VZ-BAR	109.299	121.633	133.627	131.682	128.117	117.931	108.092	
	V-THET-BAR	34.266	34.392	30.172	26.721	27.702	24.776	20.733	
IGV,ROTOR,STATOR	MACH-BAR	0.329	0.364	0.396	0.389	0.379	0.347	0.315	
----------	EFF-POLY	0.634	0.722	0.779	0.788	0.742	0.619	0.551	
PR = 1.2026	INCID-M	-8.1	-4.3	-4.7	-7.1	-6.5	-6.2	-4.6	
TR = 1.0661	DEVIATION	16.6	14.5	11.8	11.1	12.8	13.8	13.8	
EFF-A = 0.8221	OMEGA-BAR	0.237	0.158	0.099	0.088	0.104	0.162	0.204	
EFF-P = 0.8235	LOSS PAR	0.080	0.054	0.037	0.034	0.042	0.068	0.088	
	D-FACTOR	0.559	0.501	0.450	0.431	0.433	0.476	0.526	
	TURNING	30.1	32.6	33.4	32.0	32.8	35.5	39.3	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 56)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.778	9.778	9.780	9.783	9.789	9.796	9.800	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.928	-2.611	-4.203	-5.766	-7.290	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	76.490	76.460	76.267	75.872	75.273	74.469	73.975	
	VZ-BAR	76.490	76.460	76.267	75.872	75.273	74.469	73.975	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.226	0.226	0.225	0.224	0.222	0.220	0.218	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.117	10.118	10.122	10.129	10.129	10.129	10.130	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.670	9.671	9.674	9.679	9.684	9.690	9.693	
	BETABAR	7.796	9.810	11.627	12.198	12.032	9.775	6.299	
	EPSILON	-0.000	-0.879	-2.560	-4.159	-5.710	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	86.129	86.142	86.191	86.421	85.966	85.392	85.105	
	VZ-BAR	85.333	84.880	84.422	84.470	84.078	84.150	84.591	
	V-THET-BAR	11.683	14.677	17.371	18.260	17.920	14.497	9.337	
	MACH-BAR	0.255	0.255	0.255	0.256	0.254	0.252	0.252	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.3	-4.0	-3.5	-4.3	-5.8	-9.5	-13.6	
	OMEGABAR	0.041	0.038	0.028	0.008	0.006	0.006	0.006	
	TURNING	-7.8	-9.8	-11.6	-12.2	-12.0	-9.8	-6.3	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.117	10.118	10.122	10.129	10.129	10.129	10.130	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.410	9.413	9.417	9.420	9.423	9.425	9.424	
	BETABAR	6.154	7.828	9.383	9.940	9.848	8.010	5.177	
	EPSILON	-1.170	-1.938	-3.535	-5.022	-6.193	-6.855	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	108.899	108.740	108.718	108.961	108.751	108.633	108.726	
	VZ-BAR	108.271	107.725	107.263	107.325	107.148	107.571	108.282	
	V-THET-BAR	11.674	14.809	17.724	18.808	18.600	15.137	9.811	
	MACH-BAR	0.323	0.323	0.323	0.323	0.323	0.322	0.323	
	U-WHEEL	163.782	168.657	178.408	188.159	197.911	207.662	212.537	
	V-BAR-PR	186.707	187.814	193.197	200.497	208.886	220.540	229.833	
	BETABAR-PR	54.557	55.000	56.274	57.635	59.138	60.805	61.892	
	V-THET-B-P	-152.108	-153.848	-160.684	-169.352	-179.311	-192.525	-202.727	
	MACH-BAR-P	0.554	0.557	0.573	0.595	0.620	0.655	0.682	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.502	12.553	12.580	12.422	12.357	12.227	12.056	12.425
ROTOR	T-TOTAL	307.71	307.62	307.56	306.32	307.09	308.05	309.00	307.33
-----	P-STATIC	10.361	10.409	10.514	10.606	10.689	10.767	10.805	
PR = 1.2270	BETABAR	47.740	47.573	47.132	45.478	47.266	49.116	52.604	
TR = 1.0665	EPSILON	-2.886	-2.776	-3.585	-4.665	-5.925	-6.490	-6.418	
EFF-A = 0.9074	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.9080	V-BAR	179.712	179.456	175.702	164.815	158.252	148.596	138.298	
	VZ-BAR	120.855	121.070	119.531	115.565	107.389	97.266	83.992	
	V-THET-BAR	133.005	132.463	128.777	117.510	116.239	112.334	109.871	
	MACH-BAR	0.525	0.524	0.513	0.480	0.460	0.430	0.399	
	U-WHEEL	161.858	166.606	176.102	185.599	195.096	204.593	209.341	
	V-BAR-PR	124.252	125.795	128.567	134.135	133.236	134.078	130.188	
	BETABAR-PR	13.427	15.748	21.598	30.505	36.290	43.489	49.823	
	V-THET-B-P	-28.852	-34.143	-47.326	-68.089	-78.858	-92.258	-99.470	
	MACH-BAR-P	0.363	0.367	0.375	0.391	0.387	0.388	0.375	
	D-FACTOR	0.560	0.554	0.552	0.528	0.559	0.587	0.627	
	TURNING	41.1	39.3	34.7	27.1	22.8	17.3	12.1	
	INCID-M	-2.8	-1.1	1.0	2.1	2.2	2.2	2.1	
	DEVIATION	25.3	19.5	13.0	12.8	11.1	12.3	16.0	
	OMEGABAR-P	0.093	0.067	0.051	0.044	0.100	0.173	0.251	
	LOSS PAR	0.032	0.023	0.018	0.015	0.034	0.055	0.073	
	PT-RATIO	1.236	1.241	1.243	1.226	1.220	1.207	1.190	1.2270
	EFF-AD	0.920	0.942	0.953	0.954	0.891	0.801	0.706	0.9074
	EFF-POLY	0.922	0.943	0.954	0.954	0.893	0.806	0.713	0.9080
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.502	12.552	12.582	12.427	12.359	12.231	12.056	12.425
	T-TOTAL	307.71	307.63	307.57	306.35	307.08	308.03	309.00	307.33
	P-STATIC	10.370	10.395	10.473	10.554	10.627	10.700	10.735	
	BETABAR	47.967	47.470	46.677	44.859	46.385	47.957	51.062	
	EPSILON	-0.113	-0.625	-2.229	-4.190	-5.330	-6.895	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	179.324	180.015	177.634	167.499	161.363	152.290	142.273	
	VZ-BAR	120.069	121.685	121.874	118.731	111.309	101.990	89.415	
	V-THET-BAR	133.193	132.658	129.229	118.148	116.826	113.092	110.664	
	MACH-BAR	0.524	0.526	0.519	0.489	0.469	0.441	0.410	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.987	12.199	12.398	12.297	12.211	11.969	11.800	12.210
ROTOR PLUS STATOR	T-TOTAL	307.71	307.63	307.59	306.38	307.05	308.01	309.00	307.33
----------	P-STATIC	11.132	11.138	11.139	11.126	11.106	11.082	11.069	
PR = 1.2058	BETABAR	17.380	16.124	13.023	11.575	12.361	12.087	11.139	
TR = 1.0665	EPSILON	0.450	0.059	-1.062	-2.265	-3.499	-4.784	-5.489	
EFF-A = 0.8260	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8306	V-BAR	113.712	125.918	136.451	131.718	128.372	116.028	105.970	
	VZ-BAR	108.521	120.967	132.939	129.039	125.396	113.455	103.974	
	V-THET-BAR	33.968	34.952	30.747	26.430	27.481	24.297	20.473	
IGV,ROTOR,STATOR	MACH-BAR	0.327	0.363	0.394	0.381	0.370	0.333	0.303	
----------	EFF-POLY	0.627	0.706	0.803	0.828	0.789	0.620	0.587	
PR = 1.2051	INCID-M	-7.7	-5.2	-4.2	-5.7	-5.1	-5.7	-3.7	
TR = 1.0665	DEVIATION	16.6	14.8	12.1	11.2	13.0	14.1	14.1	
EFF-A = 0.8260	OMEGA-BAR	0.241	0.164	0.087	0.069	0.086	0.171	0.194	
EFF-P = 0.8281	LOSS PAR	0.082	0.057	0.032	0.027	0.035	0.072	0.084	
	D-FACTOR	0.562	0.498	0.445	0.435	0.438	0.495	0.540	
	TURNING	30.6	31.3	33.7	33.3	34.0	35.9	39.9	

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Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 57)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.005	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2560.6	P-STATIC	9.803	9.803	9.805	9.808	9.813	9.819	9.823	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.615	-4.228	-5.757	-7.288	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	73.705	73.676	73.487	73.112	72.547	71.777	71.302	
	VZ-BAR	73.705	73.676	73.487	73.112	72.547	71.777	71.302	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.218	0.217	0.217	0.216	0.214	0.212	0.210	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1418	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.118	10.119	10.122	10.129	10.129	10.129	10.130	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.703	9.703	9.706	9.711	9.716	9.721	9.724	
	BETABAR	6.942	9.898	11.675	12.212	12.313	9.811	5.571	
	EPSILON	-0.000	-0.879	-2.563	-4.135	-5.694	-7.282	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	83.001	83.035	83.054	83.265	82.803	82.235	81.990	
	VZ-BAR	82.393	81.795	81.336	81.381	80.898	81.028	81.603	
	V-THET-BAR	10.031	14.273	16.806	17.612	17.658	14.013	7.959	
	MACH-BAR	0.245	0.245	0.245	0.246	0.245	0.243	0.242	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.1	-3.9	-3.5	-4.3	-5.6	-9.8	-14.3	
	OMEGABAR	0.041	0.038	0.028	0.008	0.007	0.007	0.006	
	TURNING	-6.9	-9.9	-11.7	-12.2	-12.3	-9.8	-5.6	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.118	10.119	10.122	10.129	10.129	10.129	10.130	10.126
WCOR= 1.006	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2560.6	P-STATIC	9.462	9.464	9.468	9.471	9.475	9.478	9.477	
	BETABAR	5.488	7.916	9.430	9.964	10.096	8.054	4.591	
	EPSILON	-1.170	-1.955	-3.632	-5.285	-6.708	-7.197	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	104.802	104.668	104.637	104.871	104.581	104.379	104.497	
	VZ-BAR	104.322	103.667	103.223	103.289	102.962	103.346	104.161	
	V-THFT-BAR	10.023	14.415	17.143	18.186	18.332	14.624	8.364	
	MACH-BAR	0.311	0.310	0.310	0.311	0.310	0.310	0.310	
	U-WHEEL	163.314	168.176	177.899	187.622	197.346	207.069	211.931	
	V-BAR-PR	185.422	185.443	191.044	198.472	206.512	218.440	228.668	
	BETABAR-PR	55.763	56.012	57.294	58.639	60.093	61.762	62.902	
	V-THFT-B-P	-153.291	-153.760	-160.756	-169.876	-179.014	-192.445	-203.567	
	MACH-BAR-P	0.550	0.550	0.567	0.589	0.613	0.648	0.678	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.471	12.558	12.627	12.479	12.369	12.156	12.035	12.441
ROTOR	T-TOTAL	307.99	307.70	307.65	306.29	306.99	308.13	309.09	307.34
-----	P-STATIC	10.414	10.464	10.576	10.675	10.756	10.831	10.868	
PR = 1.2286	BETABAR	49.230	48.608	47.613	45.590	48.162	52.282	54.791	
TR = 1.0665	EPSILON	-2.886	-2.597	-3.425	-5.048	-6.321	-6.750	-6.418	
EFF-A = 0.9130	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.9132	V-BAR	176.258	177.170	178.677	163.863	155.358	141.701	133.557	
	VZ-BAR	115.101	117.145	117.755	114.671	103.630	86.701	77.005	
	V-THET-BAR	133.486	132.914	129.019	117.058	115.734	112.072	109.123	
	MACH-BAR	0.514	0.517	0.509	0.478	0.451	0.409	0.384	
	U-WHEEL	161.396	166.130	175.600	185.070	194.539	204.009	208.744	
	V-BAR-PR	118.436	121.765	126.638	133.331	130.207	126.404	125.913	
	BETABAR-PR	13.630	15.829	21.581	30.674	37.256	46.681	52.297	
	V-THET-B-P	-27.909	-33.216	-46.581	-68.016	-78.805	-91.937	-99.621	
	MACH-BAR-P	0.345	0.355	0.369	0.389	0.378	0.365	0.362	
	D-FACTOR	0.593	0.571	0.559	0.528	0.569	0.621	0.645	
	TURNING	42.1	40.2	35.7	28.0	22.8	15.1	10.6	
	INCID-M	-1.6	-0.1	2.0	3.1	3.2	3.1	3.1	
	DEVIATION	25.5	19.6	13.0	13.0	12.1	15.5	18.4	
	OMEGABAR-P	0.125	0.072	0.039	0.022	0.093	0.201	0.263	
	LOSS PAR	0.043	0.025	0.014	0.008	0.031	0.061	0.072	
	PT-RATIO	1.233	1.241	1.247	1.232	1.221	1.200	1.188	1.2286
	EFF-AD	0.896	0.940	0.965	0.978	0.900	0.773	0.696	0.9130
	EFF-POLY	0.898	0.941	0.965	0.977	0.902	0.778	0.703	0.9132
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.471	12.555	12.627	12.482	12.373	12.159	12.035	12.441
	T-TOTAL	307.99	307.70	307.66	306.28	306.97	308.11	309.09	307.34
	P-STATIC	10.425	10.455	10.541	10.628	10.702	10.775	10.812	
	BETABAR	49.519	48.580	47.252	44.992	47.310	51.133	53.425	
	EPSILON	-0.113	-0.917	-2.758	-4.142	-5.387	-6.840	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	175.745	177.508	176.306	166.230	158.221	144.934	136.862	
	VZ-BAR	114.093	117.434	119.672	117.559	107.282	90.957	81.552	
	V-THFT-BAR	133.675	133.109	129.469	117.526	116.290	112.833	109.911	
	MACH-BAR	0.512	0.518	0.514	0.485	0.460	0.419	0.394	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.044	12.208	12.407	12.280	12.160	11.945	11.813	12.198
ROTOR PLUS STATOR	T-TOTAL	307.99	307.71	307.68	306.34	306.91	308.05	309.09	307.34
----------	P-STATIC	11.190	11.195	11.196	11.183	11.165	11.144	11.133	
ER = 1.2046	BETABAR	18.448	17.204	13.863	12.557	12.728	12.377	11.266	
TR = 1.0665	EPSILON	0.450	0.048	-1.065	-2.153	-3.176	-4.560	-5.489	
EFF-A = 0.8211	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8258	V-BAR	113.422	122.905	133.661	127.448	121.924	110.273	102.144	
	VZ-BAR	107.593	117.408	129.766	124.399	118.928	107.710	100.176	
	V-THFT-BAR	35.892	36.338	32.023	27.708	26.863	23.638	19.955	
IGV,ROTOR,STATOR	MACH-BAR	0.326	0.354	0.386	0.368	0.351	0.317	0.292	
----------	EFF-POLY	0.669	0.707	0.770	0.749	0.716	0.668	0.609	
PR = 1.2040	INCID-M	-6.1	-4.1	-3.6	-5.5	-4.2	-2.5	-1.4	
TR = 1.0665	DEVIATION	17.7	15.9	13.0	12.2	13.4	14.4	14.2	
EFF-A = 0.8213	OMEGA-BAR	0.209	0.166	0.106	0.109	0.127	0.154	0.182	
EFF-P = 0.8234	LOSS PAR	0.070	0.057	0.039	0.042	0.052	0.065	0.079	
	D-FACTOR	0.552	0.505	0.455	0.453	0.469	0.512	0.549	
	TURNING	31.1	31.4	33.4	32.4	34.6	38.8	42.2	

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Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 58)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.967	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 2555.0	P-STATIC	9.828	9.828	9.830	9.833	9.838	9.844	9.848	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.913	-2.616	-4.229	-5.780	-7.286	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	70.767	70.742	70.546	70.167	69.592	68.821	68.350	
	VZ-BAR	70.767	70.742	70.546	70.167	69.592	68.821	68.350	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.209	0.209	0.208	0.207	0.205	0.203	0.202	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1418	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.119	10.120	10.122	10.129	10.129	10.129	10.130	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.719	9.720	9.723	9.727	9.732	9.737	9.739	
	BETABAR	6.819	9.665	11.492	12.029	11.966	9.746	5.995	
	EPSILON	-0.000	-0.882	-2.560	-4.142	-5.724	-7.280	-8.118	
	K-BAR	0.930	0.930	0.930	0.930	0.929	0.929	0.930	
	V-BAR	81.393	81.420	81.410	81.621	81.156	80.621	80.419	
	VZ-BAR	80.817	80.261	79.778	79.829	79.393	79.455	79.980	
	V-THET-BAR	9.664	13.669	16.219	17.010	16.826	13.647	8.399	
	MACH-BAR	0.241	0.241	0.241	0.241	0.240	0.238	0.238	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.3	-8.1	-3.6	-4.5	-5.9	-9.5	-13.9	
	OMEGABAR	0.042	0.039	0.030	0.009	0.008	0.008	0.006	
	TURNING	-6.8	-9.7	-11.5	-12.0	-12.0	-9.7	-6.0	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.119	10.120	10.123	10.129	10.129	10.129	10.130	10.126
WCOR= 0.967	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2555.0	P-STATIC	9.488	9.490	9.493	9.497	9.501	9.503	9.502	
	BETABAR	5.394	7.738	9.284	9.814	9.815	8.012	4.945	
	EPSILON	-1.170	-1.881	-3.618	-5.437	-7.045	-7.560	-6.637	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	102.719	102.592	102.560	102.788	102.467	102.236	102.384	
	VZ-BAR	102.264	101.656	101.216	101.284	100.967	101.235	102.003	
	V-THET-BAR	9.656	13.805	16.545	17.521	17.467	14.248	8.826	
	MACH-BAR	0.305	0.304	0.304	0.305	0.304	0.303	0.304	
	U-WHEEL	162.954	167.804	177.506	187.208	196.910	206.612	211.463	
	V-BAR-PR	184.277	184.526	190.141	197.617	205.899	217.377	226.862	
	BETABAR-PR	56.293	56.571	57.836	59.167	60.634	62.282	63.280	
	V-THET-B-P	-153.298	-153.999	-160.961	-169.687	-179.442	-192.363	-202.637	
	MACH-BAR-P	0.546	0.547	0.564	0.586	0.610	0.644	0.673	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.400	12.556	12.700	12.559	12.412	12.119	12.026	12.480
ROTOR	T-TOTAL	308.11	307.87	307.88	306.56	307.21	308.47	309.26	307.56
-----	P-STATIC	10.436	10.492	10.611	10.714	10.793	10.867	10.905	
PR = 1.2324	BETABAR	51.010	49.367	47.633	45.578	48.375	55.431	57.695	
TR = 1.0673	EPSILON	-2.885	-2.505	-3.477	-5.111	-6.527	-6.826	-6.418	
EFF-A = 0.9171	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
EFF-P = 0.9169	V-BAR	172.504	175.877	175.952	165.333	155.449	137.816	130.893	
	VZ-BAR	108.537	114.535	118.569	115.723	103.264	78.218	69.953	
	V-THET-BAR	134.079	133.469	130.001	118.082	116.179	113.447	110.633	
	MACH-BAR	0.502	0.513	0.513	0.482	0.451	0.398	0.376	
	U-WHEEL	161.039	165.763	175.212	184.661	194.110	203.558	208.283	
	V-BAR-PR	111.836	119.003	126.900	133.519	129.393	119.383	120.120	
	BETABAR-PR	13.950	15.743	20.871	29.973	37.051	49.048	54.384	
	V-THET-B-P	-26.960	-32.294	-45.211	-66.579	-77.930	-90.111	-97.650	
	MACH-BAR-P	0.326	0.347	0.370	0.389	0.376	0.344	0.345	
	D-FACTOR	0.628	0.587	0.559	0.529	0.576	0.655	0.670	
	TURNING	42.3	40.8	37.0	29.3	23.6	13.2	8.9	
	INCID-R	-1.1	0.4	2.6	3.6	3.7	3.6	3.5	
	DEVIATION	25.8	19.5	12.3	12.2	11.9	17.8	20.5	
	OMEGABAR-P	0.164	0.088	0.024	0.007	0.088	0.228	0.276	
	LOSS PAR	0.056	0.029	0.009	0.002	0.030	0.066	0.072	
	PT-RATIO	1.225	1.241	1.255	1.240	1.225	1.196	1.187	1.2324
	EFF-AD	0.865	0.931	0.979	0.994	0.906	0.747	0.687	0.9171
	EFF-POLY	0.868	0.932	0.979	0.993	0.908	0.752	0.694	0.9169
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.400	12.553	12.700	12.563	12.420	12.123	12.026	12.480
	T-TOTAL	308.11	307.87	307.89	306.56	307.18	308.45	309.26	307.56
	P-STATIC	10.451	10.486	10.576	10.669	10.747	10.820	10.857	
	BETABAR	51.390	49.416	47.300	45.039	47.586	54.275	56.435	
	EPSILON	-0.113	-1.286	-2.893	-4.205	-5.359	-6.913	-7.979	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	171.828	176.034	177.498	167.604	158.080	140.717	133.729	
	VZ-BAR	107.224	114.524	120.372	118.434	106.628	82.182	73.937	
	V-THET-BAR	134.268	133.684	130.445	118.594	116.690	114.208	111.431	
	MACH-BAR	0.500	0.513	0.518	0.489	0.459	0.406	0.385	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.056	12.213	12.429	12.286	12.157	11.957	11.825	12.206
ROTOR PLUS STATOR	T-TOTAL	308.11	307.87	307.91	306.60	307.06	308.33	309.26	307.56
-----------------	P-STATIC	11.255	11.257	11.255	11.243	11.229	11.213	11.205	
PR = 1.2054	BETABAR	18.289	17.179	14.204	13.361	13.508	13.592	13.325	
TR = 1.0673	EPSILON	0.450	-0.013	-1.089	-2.075	-2.920	-4.327	-5.889	
EFF-A = 0.8148	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8196	V-BAR	109.751	119.293	131.475	124.148	117.291	106.138	97.392	
	VZ-BAR	104.207	113.973	127.455	120.788	114.046	103.162	94.770	
	V-THET-BAR	34.442	35.219	32.258	28.688	27.397	24.942	22.847	
IGV,ROTOR,STATOR	MACH-BAR	0.315	0.343	0.379	0.358	0.338	0.304	0.278	
----------------	EFF-POLY	0.724	0.720	0.740	0.696	0.680	0.741	0.651	
PR = 1.2048	INCID-R	-4.3	-3.2	-3.5	-5.5	-3.9	0.6	1.7	
TR = 1.0673	DEVIATION	17.5	15.9	13.3	13.0	14.1	15.6	16.3	
EFF-A = 0.8149	OMEGA-BAR	0.176	0.164	0.127	0.146	0.161	0.127	0.172	
EFF-P = 0.8174	LOSS PAR	0.059	0.057	0.047	0.057	0.065	0.053	0.074	
	D-FACTOR	0.567	0.525	0.472	0.478	0.499	0.529	0.571	
	TURNING	33.1	32.2	33.1	31.7	34.1	40.7	43.1	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 59)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1775	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.952	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2546.2	P-STATIC	9.838	9.838	9.839	9.842	9.847	9.853	9.856	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.596	-4.198	-5.782	-7.288	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	69.640	69.613	69.437	69.085	68.543	67.819	67.373	
	VZ-BAR	69.640	69.613	69.457	69.085	68.543	67.819	67.373	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.205	0.205	0.204	0.202	0.200	0.196		
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.119	10.120	10.123	10.129	10.129	10.129	10.130	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.759	9.759	9.762	9.766	9.770	9.775	9.777	
	BETABAR	8.537	10.105	11.516	11.977	11.793	9.359	5.718	
	EPSILON	-0.000	-0.879	-2.530	-4.136	-5.702	-7.282	-8.116	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	77.266	77.294	77.289	77.517	77.078	76.559	76.388	
	VZ-BAR	76.410	76.093	75.733	75.830	75.451	75.537	76.000	
	V-THET-BAR	11.470	13.560	15.431	16.086	15.753	12.450	7.610	
	MACH-BAR	0.228	0.228	0.228	0.229	0.228	0.226	0.226	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.5	-3.7	-3.6	-4.5	-6.1	-9.9	-14.2	
	OMEGABAR	0.042	0.038	0.030	0.009	0.006	0.009	0.006	
	TURNING	-6.5	-10.1	-11.5	-12.0	-11.8	-9.4	-5.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.119	10.120	10.123	10.129	10.129	10.129	10.130	10.126
WCOR= 0.953	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2546.2	P-STATIC	9.551	9.554	9.556	9.559	9.564	9.566	9.565	
	BETABAR	6.763	6.086	9.319	9.767	9.688	7.708	4.725	
	EPSILON	-1.170	-1.752	-3.530	-5.428	-7.138	-7.742	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	97.326	97.208	97.206	97.473	97.151	96.899	97.066	
	VZ-BAR	96.649	96.246	95.923	96.055	95.766	96.021	96.736	
	V-THET-BAR	11.461	13.673	15.740	16.569	16.349	12.996	7.996	
	MACH-BAR	0.288	0.288	0.288	0.289	0.288	0.287	0.286	
	U-WHEEL	162.393	167.226	176.895	186.563	196.232	205.900	210.735	
	V-BAR-PR	179.224	181.221	187.543	195.256	203.787	215.482	224.635	
	BETABAR-PR	57.567	57.922	59.237	60.531	61.969	63.536	64.492	
	V-THET-B-P	-150.931	-153.553	-161.155	-169.995	-179.883	-192.904	-202.736	
	MACH-BAR-P	0.531	0.537	0.556	0.578	0.604	0.638	0.665	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.320	12.522	12.736	12.578	12.455	12.134	12.026	12.499
ROTOR	T-TOTAL	308.17	307.85	306.05	306.65	307.32	308.80	309.49	307.68
	P-STATIC	10.477	10.535	10.661	10.766	10.845	10.918	10.957	
PR = 1.2343	BETABAR	54.778	50.684	46.183	46.107	48.479	57.217	66.546	
TR = 1.0677	EPSILON	-2.885	-2.515	-3.486	-5.104	-6.594	-6.854	-6.418	
EFF-A = 0.9185	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.9179	V-BAR	167.351	172.566	175.106	163.662	154.698	137.794	127.769	
	VZ-BAR	96.519	109.330	116.751	113.469	102.554	73.164	62.827	
	V-THET-BAR	136.713	133.494	130.503	117.941	115.807	114.595	111.255	
	MACH-BAR	0.487	0.503	0.510	0.477	0.449	0.391	0.367	
	U-WHEEL	166.485	165.192	174.609	184.025	193.441	202.856	207.566	
	V-BAR-PR	99.403	113.844	124.609	131.320	128.643	115.378	114.996	
	BETABAR-PR	13.836	16.159	20.693	30.215	37.135	50.372	56.882	
	V-THET-B-P	-23.771	-31.700	-44.105	-66.084	-77.634	-86.762	-96.311	
	MACH-BAR-P	0.289	0.332	0.364	0.382	0.373	0.332	0.330	
	D-FACTOR	0.688	0.608	0.566	0.537	0.517	0.675	0.692	
	TURNING	43.5	41.8	38.5	30.3	24.8	13.2	7.0	
	INCID-M	-0.0	1.6	4.0	5.0	5.1	4.9	4.7	
	DEVIATION	25.7	19.9	12.1	12.5	11.9	19.2	23.0	
	OMEGABAR-P	0.212	0.101	0.020	0.005	0.080	0.240	0.290	
	LOSS PAR	0.072	0.035	0.007	0.002	0.027	0.067	0.071	
	PT-RATIO	1.217	1.237	1.258	1.242	1.230	1.198	1.187	1.2343
	EFF-AD	0.834	0.919	0.984	0.996	0.917	0.741	0.681	0.9185
	EFF-POLY	0.838	0.921	0.983	0.995	0.918	0.746	0.687	0.9179
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.320	12.518	12.735	12.581	12.463	12.139	12.026	12.499
	T-TOTAL	308.17	307.85	306.06	306.66	307.27	308.77	309.49	307.68
	P-STATIC	10.485	10.528	10.625	10.724	10.799	10.867	10.904	
	BETABAR	55.082	50.746	47.830	45.628	47.637	55.779	58.835	
	EPSILON	-0.113	-1.172	-2.998	-4.551	-4.938	-7.072	-7.979	
	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
	V-BAR	166.966	172.738	176.667	165.741	157.385	138.965	130.958	
	VZ-BAR	95.573	109.304	118.601	115.905	106.056	78.184	67.772	
	V-THET-BAR	136.967	133.738	130.937	118.474	116.271	114.847	112.058	
	MACH-BAR	0.485	0.503	0.515	0.483	0.457	0.401	0.377	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.999	12.196	12.432	12.268	12.120	11.972	11.843	12.197
ROTOR PLUS STATOR	T-TOTAL	308.17	307.85	308.06	306.69	307.12	308.63	309.49	307.68
	P-STATIC	11.269	11.273	11.273	11.259	11.243	11.228	11.219	
PR = 1.2045	BETABAR	18.159	16.681	14.535	14.020	14.166	14.385	14.261	
TR = 1.0677	EPSILON	0.450	-0.167	-1.219	-2.167	-2.825	-4.184	-5.489	
EFF-A = 0.8063	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8114	V-BAR	104.894	117.372	130.643	122.183	114.465	106.117	97.724	
	VZ-BAR	99.670	112.435	126.462	118.544	110.984	102.790	94.713	
	V-THET-BAR	32.690	33.674	32.787	29.601	28.014	26.363	24.073	
IGV,ROTOR,STATOR	MACH-BAR	0.301	0.337	0.376	0.352	0.329	0.304	0.279	
	EFF-POLY	0.731	0.725	0.709	0.654	0.605	0.726	0.649	
PR = 1.2039	INCID-M	-0.6	-1.9	-3.0	-4.9	-3.9	2.1	4.1	
TR = 1.0677	DEVIATION	17.4	15.4	13.6	13.7	14.8	16.4	17.2	
EFF-A = 0.8065	OMEGA-BAR	0.175	0.160	0.144	0.168	0.206	0.132	0.163	
EFF-P = 0.8091	LOSS PAR	0.059	0.056	0.053	0.065	0.083	0.055	0.070	
	D-FACTOR	0.593	0.531	0.474	0.481	0.512	0.523	0.556	
	TURNING	36.9	34.1	33.3	31.6	33.5	41.4	44.6	

Table B-4. Scaled Stage with Increased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 60)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.901	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2558.5	P-STATIC	9.869	9.869	9.870	9.873	9.877	9.882	9.886	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.615	-4.253	-5.788	-7.284	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	65.791	65.763	65.598	65.260	64.749	64.063	63.643	
	VZ-BAR	65.791	65.763	65.598	65.260	64.749	64.063	63.643	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.194	0.194	0.193	0.192	0.191	0.189	0.188	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.120	10.121	10.123	10.129	10.129	10.129	10.130	10.127
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.799	9.799	9.802	9.805	9.809	9.813	9.815	
	BETABAR	7.440	9.510	11.192	11.964	11.959	9.722	5.705	
	EPSILON	-0.000	-0.879	-2.547	-4.170	-5.718	-7.260	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	72.913	72.963	72.939	73.196	72.752	72.240	72.102	
	VZ-BAR	72.299	71.959	71.552	71.606	71.173	71.200	71.745	
	V-THET-BAR	9.442	12.054	14.157	15.173	15.075	12.199	7.167	
	MACH-BAR	0.215	0.215	0.215	0.216	0.215	0.213	0.213	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.6	-4.3	-3.9	-4.5	-5.9	-9.5	-14.2	
	OMEGABAR	0.042	0.038	0.031	0.009	0.010	0.010	0.006	
	TURNING	-7.4	-9.5	-11.2	-12.0	-12.0	-9.7	-5.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.120	10.121	10.123	10.129	10.129	10.129	10.130	10.127
WCOR= 0.902	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2558.5	P-STATIC	9.615	9.617	9.619	9.621	9.625	9.628	9.626	
	BETABAR	5.906	7.634	9.072	9.789	9.842	8.018	4.721	
	EPSILON	-1.170	-1.488	-3.439	-5.674	-7.649	-8.237	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	91.685	91.574	91.623	91.924	91.561	91.294	91.503	
	VZ-BAR	91.198	90.761	90.476	90.586	90.214	90.400	91.193	
	V-THET-BAR	9.434	12.164	14.447	15.628	15.650	12.734	7.531	
	MACH-BAR	0.271	0.271	0.271	0.272	0.271	0.270	0.271	
	U-WHEEL	163.181	168.038	177.754	187.469	197.184	206.900	211.757	
	V-BAR-PR	178.760	180.373	186.696	194.256	202.715	214.180	223.661	
	BETABAR-PR	59.325	59.789	61.012	62.203	63.574	65.033	65.938	
	V-THET-B-P	-153.747	-155.874	-163.307	-171.840	-181.534	-194.166	-204.226	
	MACH-BAR-P	0.529	0.534	0.553	0.575	0.600	0.634	0.662	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.046	12.427	12.733	12.593	12.491	12.194	12.035	12.508
ROTOR	T-TOTAL	308.05	307.82	308.36	307.46	308.21	309.65	310.50	308.22
----	P-STATIC	10.492	10.552	10.680	10.786	10.866	10.942	10.981	
PR = 1.2351	BETABAR	59.493	51.258	48.471	47.716	50.156	58.391	65.051	
TR = 1.0696	EPSILON	-2.885	-2.289	-3.269	-5.190	-6.716	-6.996	-6.418	
EFF-A = 0.8969	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
EFF-P = 0.8970	V-BAR	154.756	168.010	174.197	163.531	155.498	137.648	127.002	
	VZ-BAR	78.560	105.172	115.492	110.026	99.628	72.189	53.571	
	V-THET-BAR	133.333	130.972	130.407	120.982	119.388	117.133	115.151	
	MACH-BAR	0.449	0.489	0.507	0.476	0.451	0.396	0.364	
	U-WHEEL	161.264	165.994	175.456	184.918	194.380	203.842	208.573	
	V-BAR-PR	83.378	110.850	123.971	127.266	124.700	112.941	107.692	
	BETABAR-PR	19.572	18.418	21.308	30.160	36.970	50.260	60.169	
	V-THET-B-P	-27.931	-35.022	-45.049	-63.937	-74.992	-86.709	-93.422	
	MACH-BAR-P	0.242	0.323	0.361	0.370	0.361	0.325	0.309	
	D-FACTOR	0.775	0.621	0.571	0.564	0.604	0.692	0.732	
	TURNING	39.8	41.4	39.7	32.0	26.6	14.8	5.8	
	INCID-M	1.9	3.7	5.7	6.7	6.7	6.4	6.2	
	DEVIATION	31.4	22.2	12.7	12.5	11.8	19.0	26.3	
	OMEGABAR-P	0.330	0.143	0.040	0.043	0.112	0.259	0.331	
	LOSS PAR	0.109	0.049	0.014	0.015	0.038	0.073	0.074	
	PT-RATIO	1.190	1.228	1.258	1.243	1.233	1.204	1.188	1.2351
	EFF-AD	0.740	0.886	0.967	0.960	0.888	0.731	0.652	0.8969
	EFF-POLY	0.746	0.889	0.967	0.960	0.891	0.737	0.660	0.8970
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.046	12.422	12.731	12.597	12.497	12.202	12.035	12.508
	T-TOTAL	308.05	307.82	308.36	307.46	308.16	309.61	310.50	308.22
	P-STATIC	10.500	10.545	10.643	10.745	10.825	10.898	10.937	
	BETABAR	59.898	51.333	48.051	47.181	49.431	57.076	63.419	
	EPSILON	-0.713	-1.483	-2.840	-4.387	-5.453	-6.843	-7.979	
	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
	V-BAR	154.336	168.135	175.825	165.654	157.765	140.542	129.690	
	VZ-BAR	77.406	105.072	117.533	112.594	102.607	76.431	58.032	
	V-THET-BAR	133.521	131.204	130.768	121.507	119.834	117.880	115.982	
	MACH-BAR	0.447	0.489	0.512	0.482	0.458	0.405	0.372	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.779	12.168	12.422	12.295	12.129	12.008	11.850	12.201
ROTOR PLUS STATOR	T-TOTAL	308.05	307.82	308.35	307.49	307.95	309.36	310.50	308.22
----------	P-STATIC	11.357	11.362	11.362	11.350	11.335	11.321	11.313	
PR = 1.2049	BETABAR	17.799	16.148	13.795	12.868	12.864	12.989	12.482	
TR = 1.0696	EPSILON	0.450	-0.291	-1.207	-1.850	-2.385	-3.812	-5.489	
EFF-A = 0.7861	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.7917	V-BAR	80.034	109.080	124.840	118.173	108.893	101.579	90.682	
	VZ-BAR	76.204	104.784	121.238	115.205	106.160	98.980	88.539	
	V-THET-BAR	24.864	30.301	29.767	26.318	24.243	22.832	19.599	
IGV,ROTOR,STATOR	MACH-BAR	0.229	0.313	0.359	0.340	0.313	0.290	0.258	
----------	EFF-POLY	0.777	0.779	0.726	0.689	0.625	0.736	0.684	
PR = 1.2043	INCID-M	4.2	-1.3	-2.8	-3.3	-2.1	3.4	8.6	
TR = 1.0696	DEVIATION	17.0	14.8	12.9	12.5	13.5	15.0	15.4	
EFF-A = 0.7866	OMEGA-BAR	0.173	0.138	0.148	0.163	0.220	0.152	0.169	
EFF-P = 0.7896	LOSS PAR	0.058	0.048	0.055	0.063	0.089	0.064	0.073	
	D-FACTOR	0.732	0.571	0.510	0.521	0.567	0.583	0.634	
	TURNING	42.1	35.2	34.3	34.3	36.6	44.1	50.9	

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Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units

(Data Point No. 61)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.525	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3582.7	P-STATIC	9.333	9.334	9.337	9.346	9.358	9.375	9.386	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.854	-2.439	-4.096	-5.717	-7.226	-8.067	
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	115.852	115.808	115.518	114.905	113.946	112.658	111.853	
	VZ-BAR	115.852	115.808	115.518	114.905	113.946	112.658	111.853	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.344	0.344	0.343	0.341	0.339	0.335	0.332	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	9.958	9.974	10.014	10.064	10.061	10.047	10.039	10.034
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	8.851	8.859	8.880	8.904	8.927	8.951	8.962	
	BETABAR	18.431	19.567	20.213	20.253	20.071	15.687	5.729	
	EPSILON	-0.000	-0.843	-2.417	-4.043	-5.683	-7.238	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	138.423	138.817	139.779	141.117	139.448	137.089	135.885	
	VZ-BAR	131.422	130.800	131.170	132.393	130.979	131.952	135.207	
	V-THET-BAR	43.765	46.490	48.295	48.849	47.857	37.064	13.564	
	MACH-BAR	0.414	0.415	0.418	0.422	0.417	0.409	0.406	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-4.6	-4.2	-4.9	-6.3	-7.8	-13.6	-24.2	
	OMEGABAR	0.217	0.197	0.148	0.085	0.091	0.112	0.124	
	TURNING	-18.4	-19.6	-20.2	-20.3	-20.1	-15.7	-5.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	9.958	9.974	10.015	10.065	10.061	10.047	10.039	10.034
WCOR= 1.540	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3582.7	P-STATIC	8.154	8.165	8.181	8.194	8.208	8.216	8.214	
	BETABAR	14.119	15.136	15.850	16.073	15.950	12.390	4.552	
	EPSILON	-1.176	-1.706	-3.125	-4.554	-5.737	-6.363	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	179.269	179.388	180.316	181.735	180.875	179.834	179.604	
	VZ-BAR	173.853	173.164	173.461	174.631	173.912	175.623	179.037	
	V-THET-BAR	43.730	46.840	49.247	50.315	49.704	38.580	14.252	
	MACH-BAR	0.542	0.542	0.545	0.550	0.547	0.544	0.543	
	U-WHEEL	228.501	235.303	248.907	262.512	276.116	289.720	296.523	
	V-BAR-PR	253.703	255.938	264.488	274.817	285.498	306.461	334.264	
	BETABAR-PR	46.744	47.422	49.016	50.548	52.470	55.030	57.614	
	V-THET-B-P	-184.771	-188.462	-199.660	-212.196	-226.412	-251.140	-282.270	
	MACH-BAR-P	0.767	0.774	0.800	0.831	0.863	0.927	1.011	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.414	13.964	14.442	14.410	14.201	13.891	13.697	14.174
ROTOR	T-TOTAL	320.16	319.98	320.92	320.24	322.09	323.08	323.90	321.32
	P-STATIC	9.371	9.469	9.701	9.910	10.099	10.291	10.383	
PR = 1.4126	BETABAR	48.176	45.329	44.324	43.451	45.827	44.285	38.117	
TR = 1.1150	EPSILON	-2.885	-2.399	-3.212	-4.466	-5.575	-6.246	-6.418	
EFF-A = 0.9036	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
EFF-P = 0.9063	V-BAR	250.288	259.865	263.213	255.482	245.049	230.897	222.515	
	VZ-BAR	166.902	182.699	188.303	185.472	170.761	165.280	175.063	
	V-THET-BAR	186.515	184.790	183.910	175.701	175.751	161.219	137.353	
	MACH-BAR	0.734	0.768	0.776	0.751	0.715	0.669	0.642	
	U-WHEEL	225.817	232.441	245.690	258.940	272.189	285.439	292.064	
	V-BAR-PR	171.467	188.814	198.192	203.307	196.121	206.771	233.629	
	BETABAR-PR	13.250	14.613	16.162	24.171	29.459	36.919	41.469	
	V-THET-B-P	-39.301	-47.621	-61.781	-83.239	-96.438	-124.220	-154.711	
	MACH-BAR-P	0.504	0.557	0.584	0.598	0.572	0.599	0.674	
	D-FACTOR	0.519	0.454	0.442	0.441	0.497	0.502	0.465	
	TURNING	33.5	32.8	30.9	26.4	23.0	18.1	16.1	
	INCID-M	-10.6	-8.7	-6.3	-5.0	-4.4	-3.6	-2.2	
	DEVIATION	25.1	18.4	9.6	6.5	4.3	5.7	7.6	
	OMEGABAR-P	0.209	0.090	0.031	0.028	0.111	0.169	0.193	
	LOSS-PAR	0.071	0.031	0.011	0.010	0.041	0.059	0.065	
	PT-RATIO	1.347	1.400	1.442	1.432	1.412	1.383	1.364	1.4126
	EFF-AD	0.801	0.914	0.970	0.970	0.880	0.801	0.749	0.9036
	EFF-POLY	0.809	0.918	0.971	0.971	0.885	0.810	0.759	0.9063
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.414	13.954	14.438	14.414	14.206	13.893	13.697	14.174
	T-TOTAL	320.16	319.98	320.92	320.23	322.05	323.07	323.90	321.32
	P-STATIC	9.376	9.432	9.568	9.742	9.919	10.108	10.190	
	BETABAR	48.311	45.206	43.618	42.515	44.664	43.166	37.047	
	EPSILON	-0.113	-1.204	-2.792	-3.895	-5.383	-7.126	-7.979	
	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
	V-BAR	250.116	260.841	267.395	260.996	251.209	237.421	229.631	
	VZ-BAR	186.347	183.785	193.582	192.380	178.672	173.153	183.279	
	V-THET-BAR	186.779	185.082	184.460	176.376	176.580	162.424	138.344	
	MACH-BAR	0.734	0.769	0.790	0.769	0.735	0.689	0.664	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.057	13.559	14.030	14.020	13.854	13.429	13.130	13.772
ROTOR PLUS STATOR	T-TOTAL	320.16	319.98	320.92	320.23	322.05	323.10	323.90	321.32
	P-STATIC	11.602	11.606	11.595	11.564	11.521	11.465	11.433	
PR = 1.3725	BETABAR	8.610	8.278	8.015	8.520	8.909	8.840	8.240	
TR = 1.1150	EPSILON	0.450	-0.228	-1.398	-2.528	-3.725	-5.036	-5.489	
EFF-A = 0.8229	K-BAR	0.925	0.925	0.925	0.925	0.925	0.925	0.925	
EFF-P = 0.8307	V-BAR	146.099	167.090	184.878	185.609	182.205	169.335	158.802	
	VZ-BAR	144.452	165.350	183.072	183.561	180.007	167.324	157.163	
	V-THET-BAR	21.873	24.049	25.777	27.497	28.218	26.023	22.759	
IGV,ROTOR,STATOR	MACH-BAR	0.414	0.476	0.529	0.532	0.520	0.481	0.449	
	EFF-POLY	0.886	0.876	0.868	0.859	0.834	0.784	0.730	
PR = 1.3593	INCID-M	-7.3	-7.4	-7.2	-8.0	-6.8	-10.5	-17.7	
TR = 1.1150	DEVIATION	7.8	7.0	7.1	8.2	9.5	10.8	11.2	
EFF-A = 0.7966	OMEGA-BAR	0.088	0.087	0.084	0.084	0.082	0.122	0.162	
EFF-P = 0.8054	LOSS PAR	0.031	0.031	0.032	0.033	0.034	0.052	0.071	
	D-FACTOR	0.650	0.584	0.536	0.518	0.523	0.537	0.534	
	TURNING	39.7	36.9	35.6	34.0	35.8	34.3	28.8	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 62)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.479	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3581.9	P-STATIC	9.417	9.418	9.421	9.428	9.440	9.455	9.464	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.849	-2.456	-4.101	-5.696	-7.203	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	109.387	109.345	109.078	108.504	107.603	106.401	105.643	
	VZ-BAR	109.387	109.345	109.078	108.504	107.603	106.401	105.643	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.325	0.325	0.324	0.322	0.319	0.316	0.313	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	9.980	9.991	10.027	10.074	10.070	10.057	10.050	10.046
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	8.947	8.954	8.973	8.994	9.016	9.038	9.049	
	BETABAR	18.036	19.179	19.951	20.318	20.288	15.832	4.142	
	EPSILON	-0.000	-0.820	-2.412	-4.032	-5.656	-7.214	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	133.452	133.609	134.501	135.809	134.205	131.924	130.757	
	VZ-BAR	126.894	126.192	126.429	127.359	125.880	126.880	130.415	
	V-THET-BAR	41.317	43.892	45.893	47.156	46.533	35.986	9.444	
	MACH-BAR	0.398	0.399	0.401	0.405	0.401	0.394	0.390	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-5.0	-4.6	-5.2	-6.2	-7.6	-13.4	-25.8	
	OMEGABAR	0.211	0.196	0.147	0.082	0.088	0.109	0.122	
	TURNING	-18.0	-19.2	-20.0	-20.3	-20.3	-15.8	-4.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	9.981	9.992	10.028	10.074	10.070	10.057	10.050	10.046
WCOR= 1.492	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3581.9	P-STATIC	8.313	8.324	8.336	8.348	8.360	8.369	8.367	
	BETABAR	13.918	14.931	15.738	16.211	16.214	12.568	3.310	
	EPSILON	-1.170	-1.678	-3.206	-4.702	-5.919	-6.576	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	171.644	171.572	172.545	173.985	173.137	172.100	171.887	
	VZ-BAR	166.605	165.778	166.077	167.067	166.251	167.946	171.600	
	V-THET-BAR	41.283	44.206	46.800	48.573	48.345	37.443	9.924	
	MACH-BAR	0.518	0.517	0.520	0.525	0.522	0.519	0.518	
	U-WHEEL	228.455	235.255	248.856	262.458	276.060	289.661	296.462	
	V-BAR-PR	250.579	252.947	261.551	271.402	281.948	303.025	333.992	
	BETABAR-PR	48.327	49.050	50.581	52.006	53.867	56.336	59.084	
	V-THET-B-P	-167.170	-191.048	-202.056	-213.885	-227.715	-252.219	-286.538	
	MACH-BAR-P	0.756	0.763	0.789	0.819	0.851	0.914	1.007	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.819	14.385	14.737	14.787	14.683	14.459	13.859	14.597
ROTOR	T-TOTAL	322.17	321.93	322.32	322.35	324.14	326.08	327.16	323.42
------	P-STATIC	9.956	10.083	10.322	10.546	10.743	10.949	11.036	
PR = 1.4530	BETABAR	53.364	49.711	48.444	48.298	50.578	49.402	45.119	
TR = 1.1223	EPSILON	-2.883	-2.315	-2.979	-4.373	-5.538	-6.293	-6.418	
EFF-A = 0.9235	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.9250	V-BAR	240.575	249.882	250.286	244.157	235.810	223.675	203.495	
	VZ-BAR	143.557	161.568	166.027	162.429	149.747	145.552	143.593	
	V-THET-BAR	193.049	190.588	187.291	182.289	182.158	169.836	144.192	
	MACH-BAR	0.701	0.731	0.732	0.712	0.683	0.643	0.580	
	U-WHEEL	225.771	232.393	245.640	258.887	272.134	285.381	292.004	
	V-BAR-PR	147.239	166.913	175.995	179.594	174.704	185.845	206.076	
	BETABAR-PR	12.841	14.496	19.362	25.248	31.001	38.441	45.830	
	V-THET-B-P	-32.722	-41.805	-58.349	-76.598	-89.976	-115.545	-147.812	
	MACH-BAR-P	0.429	0.488	0.514	0.524	0.506	0.534	0.587	
	D-FACTOR	0.623	0.546	0.529	0.534	0.578	0.581	0.562	
	TURNING	35.5	34.6	31.2	26.8	22.9	17.9	13.3	
	INCID-M	-9.1	-7.1	-4.7	-3.5	-3.0	-2.3	-0.7	
	DEVIATION	24.7	18.2	10.8	7.6	5.8	7.2	12.0	
	OMEGABAR-P	0.198	0.071	0.021	0.024	0.088	0.157	0.239	
	LOSS PAR	0.068	0.025	0.008	0.009	0.032	0.054	0.075	
	PT-RATIO	1.385	1.440	1.469	1.468	1.458	1.438	1.379	1.4530
	EFF-AD	0.826	0.937	0.981	0.977	0.912	0.831	0.711	0.9235
	EFF-POLY	0.834	0.940	0.981	0.978	0.916	0.839	0.724	0.9250
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.819	14.372	14.734	14.788	14.686	14.466	13.859	14.597
	T-TOTAL	322.17	321.93	322.32	322.33	324.08	326.06	327.16	323.42
	P-STATIC	9.963	10.050	10.240	10.430	10.605	10.794	10.880	
	BETABAR	53.547	49.614	47.956	47.544	49.521	48.313	43.874	
	EPSILON	-0.113	-0.723	-2.243	-3.096	-5.175	-6.850	-7.979	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	240.347	250.635	252.860	247.930	240.480	229.282	209.550	
	VZ-BAR	142.806	162.400	169.342	167.360	156.115	152.478	151.059	
	V-THET-BAR	193.321	190.881	187.780	182.920	182.914	171.227	145.233	
	MACH-BAR	0.700	0.733	0.740	0.724	0.698	0.660	0.598	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.325	13.874	14.373	14.480	14.393	14.106	13.378	14.237
ROTOR PLUS STATOR	T-TOTAL	322.17	321.93	322.31	322.29	323.97	326.03	327.16	323.42
----------	P-STATIC	12.202	12.208	12.204	12.182	12.147	12.098	12.064	
PR = 1.4172	BETABAR	9.165	8.762	8.071	8.837	9.508	8.225	7.608	
TR = 1.1223	EPSILON	0.450	-0.073	-1.062	-2.118	-3.346	-4.803	-5.489	
EFF-A = 0.8563	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8632	V-BAR	126.806	152.239	171.946	176.610	175.497	167.654	138.288	
	VZ-BAR	125.187	150.456	170.242	174.513	173.086	165.929	137.071	
	V-THET-BAR	20.198	23.231	24.142	27.130	28.991	23.990	18.309	
IGV,ROTOR,STATOR	MACH-BAR	0.357	0.431	0.489	0.503	0.498	0.473	0.387	
----------	EFF-POLY	0.846	0.845	0.875	0.881	0.875	0.819	0.744	
PR = 1.4052	INCID-M	-2.1	-3.0	-2.9	-3.0	-2.0	-5.3	-10.9	
TR = 1.1223	DEVIATION	8.4	7.5	7.2	8.5	10.1	10.2	10.5	
EFF-A = 0.8366	OMEGA-BAR	0.128	0.115	0.080	0.071	0.072	0.098	0.162	
EFF-P = 0.8422	LOSS PAR	0.045	0.041	0.030	0.028	0.029	0.042	0.071	
	D-FACTOR	0.728	0.636	0.568	0.540	0.539	0.552	0.612	
	TURNING	44.4	40.8	39.9	38.7	40.0	40.1	36.3	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 63)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.444	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3582.5	P-STATIC	9.453	9.454	9.457	9.464	9.475	9.489	9.498	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.849	-2.456	-4.110	-5.708	-7.203	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	106.529	106.490	106.226	105.667	104.792	103.622	102.885	
	VZ-BAR	106.529	106.490	106.226	105.667	104.792	103.622	102.885	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.316	0.316	0.315	0.313	0.311	0.307	0.305	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	9.995	10.004	10.036	10.080	10.076	10.064	10.057	10.054
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.013	9.020	9.038	9.059	9.079	9.100	9.110	
	BETABAR	18.455	19.263	20.003	20.076	20.252	16.022	4.134	
	EPSILON	-0.000	-0.820	-2.412	-4.033	-5.669	-7.214	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	129.843	129.852	130.620	131.895	130.355	128.157	127.024	
	VZ-BAR	123.165	122.560	122.740	123.881	122.296	123.140	126.693	
	V-THET-BAR	41.103	42.844	44.681	45.274	45.123	35.368	9.157	
	MACH-BAR	0.387	0.387	0.390	0.393	0.389	0.382	0.378	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-4.6	-4.5	-5.1	-6.4	-7.6	-13.2	-25.8	
	OMEGABAR	0.201	0.189	0.142	0.078	0.084	0.105	0.117	
	TURNING	-18.5	-19.3	-20.0	-20.1	-20.3	-16.0	-4.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	9.995	10.004	10.037	10.080	10.076	10.064	10.057	10.054
WCOR= 1.456	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3582.5	P-STATIC	8.422	8.432	8.445	8.455	8.468	8.476	8.475	
	BETABAR	14.302	15.055	15.835	16.080	16.253	12.774	3.318	
	EPSILON	-1.170	-1.645	-3.112	-4.636	-5.970	-6.666	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	166.251	166.091	166.948	168.367	167.523	166.470	166.258	
	VZ-BAR	161.099	160.390	160.613	161.781	160.827	162.321	165.979	
	V-THET-BAR	41.070	43.141	45.555	46.633	46.887	36.801	9.622	
	MACH-BAR	0.500	0.500	0.503	0.507	0.505	0.501	0.501	
	U-WHEEL	228.488	235.289	248.893	262.496	276.100	289.704	296.505	
	V-BAR-PR	247.140	250.293	259.120	269.760	280.009	300.518	331.438	
	BETABAR-PR	49.319	50.147	51.694	53.149	54.944	57.302	59.948	
	V-THET-B-P	-187.417	-192.148	-203.337	-215.864	-229.214	-252.903	-286.883	
	MACH-BAR-P	0.744	0.753	0.780	0.813	0.843	0.905	0.998	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.971	14.494	14.792	14.935	14.848	14.579	14.001	14.720
	T-TOTAL	323.06	322.76	323.09	322.93	324.81	326.89	328.17	324.14
	P-STATIC	10.246	10.364	10.621	10.862	11.078	11.286	11.374	
ROTOR	BETABAR	57.012	52.501	51.345	50.198	53.191	52.946	49.103	
PR = 1.4641	EPSILON	-2.885	-2.211	-3.039	-4.345	-5.640	-6.282	-6.418	
TR = 1.1248	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-A = 0.9244	V-BAR	234.590	243.408	242.085	237.532	228.892	215.197	194.942	
EFF-P = 0.9260	VZ-BAR	127.726	148.176	151.212	152.053	137.142	129.671	127.630	
	V-THET-BAR	196.769	193.088	189.050	182.487	183.255	171.741	147.354	
	MACH-BAR	0.680	0.709	0.704	0.690	0.661	0.616	0.553	
	U-WHEEL	225.803	242.427	245.676	258.925	272.173	285.423	292.047	
	V-BAR-PR	130.985	153.317	161.482	170.195	163.450	172.448	192.939	
	BETABAR-PR	12.607	14.855	20.525	26.689	32.960	41.240	48.585	
	V-THET-B-P	-29.034	-39.339	-56.626	-76.438	-88.919	-113.681	-144.693	
	MACH-BAR-P	0.380	0.447	0.470	0.494	0.472	0.493	0.547	
	D-FACTOR	0.689	0.601	0.585	0.569	0.619	0.627	0.603	
	TURNING	36.5	35.3	31.2	26.5	22.0	16.1	11.4	
	INCID-M	-8.1	-6.0	-3.6	-2.4	-1.9	-1.3	0.2	
	DEVIATION	24.7	18.6	11.9	9.0	7.8	10.0	14.7	
	OMEGABAR-P	0.204	0.081	0.037	0.015	0.080	0.161	0.245	
	LOSS PAR	0.070	0.028	0.013	0.006	0.028	0.053	0.073	
	PT-RATIO	1.398	1.449	1.474	1.481	1.474	1.449	1.392	1.4641
	EFF-AD	0.829	0.931	0.967	0.985	0.922	0.832	0.714	0.9244
	EFF-POLY	0.837	0.934	0.968	0.986	0.926	0.840	0.727	0.9260
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.971	14.483	14.787	14.934	14.852	14.588	14.001	14.720
	T-TOTAL	323.06	322.77	323.09	322.91	324.75	326.85	328.17	324.14
	P-STATIC	10.257	10.352	10.554	10.756	10.946	11.143	11.229	
	BETABAR	57.286	52.593	50.935	49.464	52.040	51.746	47.690	
	EPSILON	-0.113	-0.973	-2.309	-3.622	-5.162	-6.866	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	234.195	243.532	244.193	240.956	233.372	220.557	200.696	
	VZ-BAR	126.569	147.942	153.889	156.605	143.551	136.553	135.097	
	V-THET-BAR	197.047	193.418	189.599	183.125	183.993	173.199	148.417	
	MACH-BAR	0.679	0.709	0.711	0.701	0.675	0.632	0.570	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.507	13.998	14.470	14.600	14.447	14.187	13.517	14.334
ROTOR PLUS STATOR	T-TOTAL	323.06	322.77	323.09	322.87	324.63	326.82	328.17	324.14
	P-STATIC	12.423	12.428	12.423	12.401	12.366	12.320	12.290	
PR = 1.4257	BETABAR	10.904	9.581	8.060	8.707	9.725	9.541	9.669	
TR = 1.1248	EPSILON	0.450	-0.140	-1.173	-2.275	-3.331	-4.735	-5.489	
EFF-A = 0.8543	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8614	V-BAR	123.818	147.076	166.370	171.964	168.385	161.018	132.946	
	VZ-BAR	121.583	145.027	164.727	169.981	165.965	158.791	131.058	
	V-THET-BAR	23.422	24.448	23.326	26.032	28.442	26.690	22.329	
IGV,ROTOR,STATOR	MACH-BAR	0.348	0.415	0.472	0.489	0.477	0.453	0.371	
	EFF-POLY	0.849	0.841	0.881	0.863	0.821	0.784	0.718	
PR = 1.4148	INCID-M	1.6	-0.1	0.1	-1.0	0.5	-1.9	-7.1	
TR = 1.1248	DEVIATION	10.1	8.3	7.2	8.3	10.4	11.5	12.6	
EFF-A = 0.8371	OMEGA-BAR	0.125	0.118	0.075	0.080	0.104	0.116	0.175	
EFF-P = 0.8427	LOSS PAR	0.044	0.042	0.028	0.031	0.042	0.050	0.076	
	D-FACTOR	0.734	0.648	0.579	0.548	0.558	0.563	0.619	
	TURNING	46.4	43.0	42.9	40.8	42.3	42.2	38.0	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 64)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN .100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.410	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 3579.8	P-STATIC	9.501	9.502	9.505	9.511	9.521	9.534	9.542	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.832	-2.454	-4.063	-5.693	-7.192	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	102.601	102.566	102.315	101.796	100.961	99.846	99.134	
	VZ-BAR	102.601	102.566	102.315	101.796	100.961	99.846	99.134	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.304	0.304	0.303	0.302	0.299	0.296	0.294	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.009	10.015	10.043	10.085	10.082	10.070	10.064	10.061
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.097	9.104	9.121	9.140	9.159	9.178	9.188	
	BETABAR	18.778	19.360	19.881	20.239	20.205	16.188	4.898	
	EPSILON	-0.000	-0.812	-2.402	-4.002	-5.656	-7.183	-8.118	
	K-BAR	0.960	0.960	0.960	0.960	0.959	0.959	0.960	
	V-BAR	124.854	124.758	125.399	126.672	125.145	123.034	121.933	
	VZ-BAR	118.209	117.703	117.925	118.852	117.444	118.122	121.488	
	V-THET-BAR	40.190	41.357	42.643	43.820	43.222	34.296	10.410	
	MACH-BAR	0.372	0.372	0.374	0.377	0.373	0.366	0.363	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-4.3	-4.4	-5.3	-6.3	-7.7	-13.1	-25.0	
	OMEGABAR	0.194	0.184	0.140	0.075	0.082	0.102	0.115	
	TURNING	-18.8	-19.4	-19.9	-20.2	-20.2	-16.2	-4.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.009	10.015	10.044	10.085	10.081	10.070	10.064	10.061
WCOR= 1.420	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3579.8	P-STATIC	8.560	8.569	8.580	8.591	8.605	8.615	8.614	
	BETABAR	14.623	15.194	15.807	16.280	16.298	12.986	3.953	
	EPSILON	-1.170	-1.672	-3.372	-5.081	-6.522	-6.904	-6.637	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	159.075	158.856	159.642	160.992	160.023	158.889	158.662	
	VZ-BAR	153.922	153.302	153.605	154.536	153.593	154.800	158.285	
	V-THET-BAR	40.156	41.635	43.486	45.132	44.907	35.700	10.939	
	MACH-BAR	0.478	0.477	0.480	0.484	0.481	0.477	0.477	
	U-WHEEL	228.321	235.117	246.711	262.304	275.898	289.492	296.289	
	V-BAR-PR	243.099	246.856	256.344	266.544	277.396	297.281	326.311	
	BETABAR-PR	50.716	51.608	53.185	54.564	56.378	58.615	60.983	
	V-THET-B-P	-188.162	-193.482	-205.225	-217.172	-230.991	-253.792	-285.350	
	MACH-BAR-P	0.730	0.742	0.770	0.801	0.834	0.893	0.980	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.103	14.567	14.887	14.908	14.776	14.437	14.123	14.709
ROTOR	T-TOTAL	323.73	323.38	323.60	323.26	325.02	327.18	328.80	324.49
	P-STATIC	10.406	10.535	10.793	11.030	11.234	11.431	11.517	
PR = 1.4621	BETABAR	58.785	54.200	52.593	52.078	55.297	56.175	51.335	
TR = 1.1261	EPSILON	-2.885	-2.104	-3.043	-4.655	-6.084	-6.486	-6.418	
EFF-A = 0.9121	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9142	V-BAR	232.606	239.685	238.403	231.443	221.755	205.935	193.349	
	VZ-BAR	120.547	140.205	144.823	142.243	126.255	114.616	120.798	
	V-THET-BAR	198.931	194.379	189.373	182.573	182.293	171.080	150.970	
	MACH-BAR	0.673	0.696	0.692	0.670	0.638	0.587	0.548	
	U-WHEEL	225.639	232.257	245.497	258.735	271.975	285.214	291.833	
	V-BAR-PR	123.470	145.240	155.331	161.351	154.884	161.764	185.566	
	BETABAR-PR	12.492	15.103	21.180	28.166	35.394	44.866	49.385	
	V-THET-B-P	-26.707	-37.878	-56.123	-76.163	-89.682	-114.134	-140.864	
	MACH-BAR-P	0.357	0.422	0.451	0.467	0.446	0.461	0.526	
	D-FACTOR	0.719	0.632	0.609	0.600	0.648	0.661	0.622	
	TURNING	38.2	36.5	32.0	26.4	21.0	13.7	11.6	
	INCID-M	-0.7	-4.5	-2.1	-1.0	-0.5	-0.0	1.2	
	DEVIATION	24.4	18.8	12.6	10.5	10.2	13.6	15.5	
	OMEGABAR-P	0.207	0.092	0.042	0.032	0.101	0.193	0.248	
	LOSS PAR	0.071	0.032	0.015	0.011	0.035	0.060	0.072	
	PT-RATIO	1.409	1.454	1.480	1.478	1.466	1.434	1.403	1.4621
	EFF-AD	0.834	0.925	0.963	0.970	0.903	0.801	0.721	0.9121
	EFF-POLY	0.842	0.929	0.965	0.971	0.908	0.811	0.734	0.9142
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.103	14.558	14.864	14.910	14.782	14.444	14.123	14.709
	T-TOTAL	323.73	323.38	323.61	323.25	324.96	327.14	328.80	324.49
	P-STATIC	10.412	10.515	10.732	10.942	11.130	11.315	11.402	
	BETABAR	59.009	54.210	52.196	51.431	54.270	55.093	50.198	
	EPSILON	-0.113	-1.278	-2.571	-3.624	-4.901	-6.770	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	232.385	240.109	240.347	234.397	225.496	210.429	197.927	
	VZ-BAR	119.655	140.419	147.323	146.136	131.684	120.407	126.700	
	V-THET-BAR	199.212	194.740	189.902	183.265	183.046	172.571	152.059	
	MACH-BAR	0.673	0.698	0.698	0.680	0.650	0.601	0.561	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.670	14.088	14.548	14.592	14.395	14.123	13.641	14.344
ROTOR PLUS STATOR	T-TOTAL	323.73	323.39	323.61	323.24	324.77	327.05	328.80	324.49
	P-STATIC	12.562	12.566	12.562	12.540	12.509	12.470	12.444	
PR = 1.4258	BETABAR	10.581	9.853	8.365	8.651	9.489	9.482	9.162	
TR = 1.1261	EPSILON	0.450	-0.101	-0.983	-1.969	-3.030	-4.658	-5.489	
EFF-A = 0.8462	K-BAR	0.915	0.915	0.915	0.915	0.915	0.915	0.915	
EFF-P = 0.8537	V-BAR	124.544	144.381	163.401	165.867	160.194	151.515	130.795	
	VZ-BAR	122.426	142.254	161.663	163.980	158.003	149.445	129.127	
	V-THET-BAR	22.869	24.686	23.771	24.949	26.407	24.962	20.825	
IGV,ROTOR,STATOR	MACH-BAR	0.349	0.407	0.463	0.470	0.452	0.425	0.365	
	EFF-POLY	0.856	0.843	0.879	0.863	0.825	0.817	0.715	
PR = 1.4158	INCID-M	3.3	1.6	1.4	0.9	2.8	1.5	-4.6	
TR = 1.1261	DEVIATION	9.8	8.5	7.5	8.3	10.1	11.5	12.1	
EFF-A = 0.8311	OMEGA-BAR	0.117	0.116	0.076	0.080	0.106	0.103	0.177	
EFF-P = 0.8368	LOSS PAR	0.041	0.042	0.029	0.031	0.043	0.044	0.077	
	D-FACTOR	0.733	0.656	0.585	0.564	0.581	0.590	0.637	
	TURNING	48.4	44.4	43.8	42.8	44.8	45.6	41.5	

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Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 65)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.362	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3583.3	P-STATIC	9.547	9.547	9.550	9.556	9.565	9.578	9.585	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.859	-2.467	-4.110	-5.699	-7.191	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	W-BAR	98.717	98.684	98.438	97.922	97.116	96.039	95.350	
	VZ-BAR	98.717	98.684	98.438	97.922	97.116	96.039	95.350	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.292	0.292	0.292	0.290	0.288	0.284	0.282	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.027	10.031	10.054	10.091	10.088	10.078	10.072	10.070
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.219	9.225	9.239	9.257	9.274	9.291	9.298	
	BETABAR	18.306	19.231	20.078	20.415	20.346	16.359	5.199	
	EPSILON	-0.000	-0.822	-2.404	-4.034	-5.642	-7.163	-8.118	
	K-BAR	0.980	0.980	0.980	0.980	0.979	0.979	0.980	
	W-BAR	117.198	117.028	117.485	118.773	117.248	115.269	114.310	
	VZ-BAR	111.267	110.497	110.344	111.312	109.933	110.572	113.840	
	V-THET-BAR	36.810	38.546	40.333	41.430	40.766	32.461	10.358	
	MACH-BAR	0.348	0.348	0.349	0.353	0.349	0.343	0.340	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-4.8	-4.5	-5.1	-6.1	-7.5	-12.9	-24.7	
	OMEGABAR	0.179	0.172	0.134	0.070	0.077	0.097	0.109	
	TURNING	-18.3	-19.2	-20.1	-20.4	-20.3	-16.4	-5.2	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.027	10.031	10.054	10.092	10.088	10.078	10.072	10.070
WCOR= 1.370	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3583.3	P-STATIC	8.752	8.760	8.770	8.784	8.800	8.811	8.810	
	BETABAR	14.338	15.178	16.040	16.524	16.534	13.233	4.234	
	EPSILON	-1.170	-1.834	-3.835	-5.853	-7.524	-7.186	-6.637	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	W-BAR	148.527	148.278	148.879	150.031	148.832	147.647	147.416	
	VZ-BAR	143.901	143.105	143.084	143.835	142.678	143.704	147.014	
	V-THET-BAR	36.781	38.823	41.136	42.671	42.356	33.793	10.884	
	MACH-BAR	0.445	0.444	0.446	0.450	0.446	0.442	0.441	
	U-WHEEL	228.541	235.344	248.951	262.558	276.164	289.771	296.575	
	V-BAR-PR	239.749	243.106	252.311	262.753	273.906	293.561	321.298	
	BETABAR-PR	53.115	53.938	55.451	56.809	58.606	60.687	62.770	
	V-THET-B-P	-191.760	-196.521	-207.815	-219.887	-233.809	-255.979	-285.691	
	MACH-BAR-P	0.718	0.728	0.756	0.787	0.821	0.879	0.962	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.245	14.768	15.051	14.958	14.630	14.292	14.316	14.759
ROTOR	T-TOTAL	324.44	324.11	324.18	323.47	325.04	327.47	329.43	324.78
	P-STATIC	10.535	10.663	10.930	11.159	11.357	11.545	11.633	
PR = 1.4657	BETABAR	58.848	54.057	52.640	52.438	57.436	59.264	51.605	
TR = 1.1270	EPSILON	-2.885	-2.113	-3.424	-5.327	-6.757	-6.622	-6.418	
EFF-A = 0.9113	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9133	V-BAR	232.009	240.507	238.513	228.438	213.478	197.262	195.166	
	VZ-BAR	120.020	141.173	144.734	139.262	114.912	100.782	121.213	
	V-THET-BAR	198.553	194.696	189.580	181.076	179.884	169.528	152.962	
	MACH-BAR	0.671	0.698	0.692	0.661	0.612	0.561	0.552	
	U-WHEEL	225.856	232.481	245.734	258.985	272.237	285.489	292.115	
	V-BAR-PR	123.087	146.147	155.249	159.594	147.461	153.637	184.543	
	BETABAR-PR	12.816	14.974	21.204	29.227	38.806	48.998	48.942	
	V-THET-B-P	-27.303	-37.785	-56.154	-77.909	-92.353	-115.961	-139.153	
	MACH-BAR-P	0.356	0.424	0.450	0.462	0.423	0.437	0.522	
	D-FACTOR	0.721	0.628	0.607	0.604	0.672	0.686	0.622	
	TURNING	40.3	39.0	34.2	27.6	19.8	11.7	13.8	
	INCID-M	-4.3	-2.2	0.2	1.3	1.7	2.0	3.0	
	DEVIATION	24.7	18.7	12.6	11.6	13.6	17.8	15.1	
	OMEGABAR-P	0.211	0.081	0.029	0.032	0.129	0.227	0.242	
	LOSS-PAR	0.072	0.028	0.010	0.011	0.042	0.066	0.071	
	PT-RATIO	1.421	1.472	1.496	1.482	1.451	1.418	1.421	1.4657
	EFF-AU	0.838	0.937	0.976	0.971	0.877	0.770	0.730	0.9113
	EFF-POLY	0.846	0.940	0.977	0.972	0.883	0.781	0.751	0.9133
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.245	14.757	15.050	14.967	14.642	14.293	14.316	14.759
	T-TOTAL	324.44	324.12	324.19	323.46	324.97	327.44	329.43	324.78
	P-STATIC	10.542	10.645	10.873	11.087	11.272	11.453	11.536	
	BETABAR	59.091	54.090	52.291	51.875	56.430	58.301	50.748	
	EPSILON	-0.113	-1.461	-2.888	-4.302	-5.435	-7.226	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	W-BAR	231.746	240.849	240.343	231.051	216.802	200.843	198.956	
	VZ-BAR	119.043	141.265	147.007	142.650	119.892	105.505	125.886	
	V-THET-BAR	198.833	195.046	190.142	181.754	180.604	170.862	154.066	
	MACH-BAR	0.670	0.699	0.697	0.669	0.623	0.571	0.564	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.852	14.297	14.676	14.538	14.277	13.960	13.900	14.350
ROTOR PLUS STATOR	T-TOTAL	324.44	324.13	324.20	323.44	324.65	327.34	329.43	324.78
	P-STATIC	12.703	12.703	12.691	12.667	12.637	12.605	12.586	
PR = 1.4251	BETABAR	9.720	9.394	8.644	8.393	8.415	8.189	7.472	
TR = 1.1270	EPSILON	0.450	-0.071	-0.838	-1.623	-2.541	-4.632	-5.489	
EFF-A = 0.8384	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8462	W-BAR	126.188	146.971	162.750	158.376	149.486	137.466	136.045	
	VZ-BAR	124.377	145.001	160.901	156.680	147.877	136.064	134.890	
	V-THET-BAR	21.305	23.982	24.460	23.115	21.875	19.582	17.691	
IGV,ROTOR,STATOR	MACH-BAR	0.354	0.414	0.460	0.448	0.421	0.385	0.379	
	EFF-POLY	0.868	0.846	0.859	0.820	0.838	0.809	0.746	
PR = 1.4164	INCID-M	3.4	1.4	1.5	1.4	4.9	4.7	-4.0	
TR = 1.1270	DEVIATION	8.9	8.1	7.8	8.0	9.0	10.2	10.4	
EFF-A = 0.8257	OMEGA-BAR	0.106	0.112	0.089	0.110	0.108	0.117	0.150	
EFF-P = 0.8317	LOSS PAR	0.037	0.040	0.034	0.043	0.044	0.050	0.066	
	D-FACTOR	0.727	0.648	0.587	0.592	0.620	0.647	0.623	
	TURNING	49.4	44.7	43.6	43.5	48.0	50.1	43.3	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 66)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.335	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3581.8	P-STATIC	9.559	9.559	9.562	9.568	9.577	9.589	9.597	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.888	-2.500	-4.144	-5.731	-7.192	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	97.700	97.664	97.415	96.894	96.087	95.023	94.342	
	VZ-BAR	97.700	97.664	97.415	96.894	96.087	95.023	94.342	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.289	0.289	0.289	0.287	0.285	0.281	0.279	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.036	10.039	10.059	10.094	10.091	10.082	10.076	10.074
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.244	9.250	9.263	9.280	9.297	9.314	9.321	
	BETABAR	17.494	18.757	19.745	20.191	20.361	16.555	4.531	
	EPSILON	-0.000	-0.854	-2.440	-4.070	-5.676	-7.184	-8.118	
	K-BAR	0.970	0.970	0.970	0.970	0.969	0.969	0.970	
	V-BAR	115.886	115.714	116.032	117.265	115.776	113.836	112.895	
	VZ-BAR	110.527	109.567	109.210	110.058	108.542	109.084	112.543	
	V-THET-BAR	34.835	37.208	39.200	40.475	40.281	32.431	8.917	
	MACH-BAR	0.344	0.344	0.345	0.349	0.344	0.338	0.335	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-5.6	-5.0	-5.4	-6.3	-7.5	-12.7	-25.4	
	OMEGABAR	0.167	0.161	0.128	0.066	0.073	0.092	0.104	
	TURNING	-17.5	-18.8	-19.7	-20.2	-20.4	-16.6	-4.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.036	10.039	10.059	10.095	10.091	10.082	10.076	10.074
WCOR= 1.342	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3581.8	P-STATIC	8.787	8.795	8.805	8.818	8.836	8.847	8.846	
	BETABAR	13.714	14.820	15.783	16.353	16.566	13.383	3.695	
	EPSILON	-1.170	-1.824	-3.823	-5.963	-7.764	-7.269	-6.637	
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	146.825	146.548	147.002	148.094	146.844	145.632	145.415	
	VZ-BAR	142.640	141.672	141.460	142.103	140.749	141.052	145.113	
	V-THET-BAR	34.808	37.484	39.983	41.695	41.868	33.704	9.370	
	MACH-BAR	0.440	0.439	0.440	0.444	0.440	0.436	0.435	
	U-WHEEL	228.448	235.248	248.849	262.450	276.052	289.653	296.453	
	V-BAR-PR	240.505	243.274	252.263	262.539	273.227	292.536	321.674	
	BETABAR-PR	53.624	54.383	55.890	57.229	58.993	61.034	63.185	
	V-THET-B-P	-193.640	-197.764	-208.866	-220.755	-234.184	-255.949	-287.083	
	MACH-BAR-P	0.720	0.728	0.755	0.786	0.818	0.876	0.963	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	14.305	14.751	15.128	15.034	14.685	14.287	14.437	14.808
ROTOR	T-TOTAL	324.76	324.50	324.55	323.81	325.43	327.91	329.63	325.13
	P-STATIC	10.589	10.718	10.985	11.221	11.417	11.607	11.697	
PR = 1.4699	BETABAR	58.679	54.907	52.737	52.678	58.416	61.299	50.715	
TR = 1.1283	EPSILON	-2.885	-2.237	-3.429	-5.412	-6.985	-6.648	-6.418	
EFF-A = 0.9097	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9119	V-BAR	231.808	238.437	238.692	228.397	212.979	194.859	196.606	
	VZ-BAR	120.502	137.081	144.522	138.478	111.551	93.527	124.488	
	V-THET-BAR	198.025	195.079	189.966	181.627	181.416	170.848	152.175	
	MACH-BAR	0.670	0.691	0.692	0.660	0.610	0.553	0.557	
	U-WHEEL	225.764	232.386	245.633	258.879	272.126	285.372	291.995	
	V-BAR-PR	123.653	142.072	154.876	158.587	143.791	147.863	187.207	
	BETABAR-PR	12.963	15.215	21.065	29.159	39.125	50.774	48.320	
	V-THET-B-P	-27.739	-37.307	-55.667	-77.253	-90.710	-114.524	-139.826	
	MACH-BAR-P	0.357	0.412	0.449	0.458	0.412	0.420	0.530	
	D-FACTOR	0.722	0.647	0.611	0.610	0.687	0.707	0.615	
	TURNING	40.7	39.2	34.8	28.1	19.9	10.3	14.9	
	INCID-M	-3.8	-1.7	0.6	1.7	2.1	2.4	3.4	
	DEVIATION	24.8	19.0	12.5	11.5	13.9	19.6	14.5	
	OMEGABAR-P	0.210	0.101	0.027	0.028	0.131	0.240	0.231	
	LOSS PAR	0.072	0.035	0.009	0.010	0.043	0.067	0.069	
	PT-RATIO	1.425	1.469	1.503	1.489	1.456	1.417	1.433	1.4699
	EFF-AD	0.840	0.922	0.978	0.974	0.876	0.760	0.752	0.9097
	EFF-POLY	0.847	0.926	0.979	0.975	0.882	0.771	0.764	0.9119
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	14.305	14.741	15.124	15.043	14.700	14.287	14.437	14.808
	T-TOTAL	324.76	324.51	324.56	323.80	325.35	327.88	329.63	325.13
	P-STATIC	10.600	10.703	10.935	11.154	11.335	11.519	11.603	
	BETABAR	58.972	54.965	52.486	52.166	57.338	60.317	49.961	
	EPSILON	-0.113	-1.358	-3.057	-4.402	-5.304	-7.345	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	231.419	238.688	240.224	230.832	216.300	198.249	200.200	
	VZ-BAR	119.288	137.027	146.286	141.591	116.743	98.131	128.791	
	V-THET-BAR	198.305	195.417	190.546	182.303	182.060	172.178	153.274	
	MACH-BAR	0.669	0.692	0.697	0.668	0.621	0.563	0.567	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.933	14.368	14.700	14.525	14.238	13.943	13.758	14.354
ROTOR PLUS STATOR	T-TOTAL	324.76	324.51	324.57	323.78	324.96	327.82	329.63	325.13
	P-STATIC	12.734	12.735	12.723	12.697	12.668	12.638	12.619	
PR = 1.4248	BETABAR	12.083	10.704	8.657	8.170	7.832	7.162	6.060	
TR = 1.1283	EPSILON	0.450	-0.104	-0.958	-1.595	-2.345	-4.728	-5.489	
EFF-A = 0.8298	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8381	V-BAR	128.696	148.579	162.368	156.635	146.420	135.053	127.103	
	VZ-BAR	125.845	145.996	160.518	155.045	145.054	133.999	126.392	
	V-THET-BAR	26.939	27.574	24.437	22.259	19.952	16.839	13.418	
IGV,ROTOR,STATOR	MACH-BAR	0.361	0.419	0.459	0.443	0.412	0.377	0.354	
	EFF-POLY	0.873	0.870	0.840	0.787	0.799	0.795	0.634	
PR = 1.4167	INCID-M	3.3	2.3	1.7	1.7	5.8	6.7	-4.8	
TR = 1.1283	DEVIATION	11.3	9.4	7.8	7.8	8.5	9.1	9.0	
EFF-A = 0.8185	OMEGA-BAR	0.100	0.092	0.101	0.133	0.137	0.124	0.240	
EFF-P = 0.8247	LOSS PAR	0.035	0.033	0.038	0.052	0.056	0.053	0.105	
	D-FACTOR	0.706	0.633	0.589	0.602	0.639	0.663	0.678	
	TURNING	46.9	44.3	43.8	44.0	49.5	53.2	43.9	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 67)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.320	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3014.4	P-STATIC	9.560	9.560	9.563	9.569	9.578	9.590	9.597	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.845	-2.514	-4.101	-5.698	-7.234	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	97.620	97.582	97.331	96.820	96.026	94.951	94.283	
	VZ-BAR	97.620	97.582	97.331	96.820	96.026	94.951	94.283	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.289	0.289	0.288	0.287	0.284	0.281	0.279	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.040	10.043	10.061	10.096	10.093	10.084	10.078	10.076
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.228	9.236	9.253	9.271	9.288	9.305	9.313	
	BETABAR	22.973	21.824	21.430	21.791	20.925	17.173	11.232	
	EPSILON	-0.000	-0.841	-2.459	-4.054	-5.652	-7.249	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	117.408	116.973	116.993	118.043	116.512	114.595	113.587	
	VZ-BAR	108.096	108.589	108.905	109.608	108.828	109.475	111.412	
	V-THET-BAR	45.823	43.486	42.746	43.820	41.612	33.834	22.125	
	MACH-BAR	0.349	0.348	0.348	0.351	0.346	0.341	0.337	
	INCID-B	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-0.1	-1.9	-3.7	-4.7	-7.0	-12.1	-18.7	
	OMEGABAR	0.160	0.155	0.124	0.063	0.070	0.088	0.100	
	TURNING	-23.0	-21.8	-21.4	-21.8	-20.9	-17.2	-11.2	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.040	10.043	10.062	10.096	10.093	10.083	10.078	10.076
WCOR= 1.328	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3014.4	P-STATIC	8.779	8.790	8.803	8.815	8.825	8.832	8.832	
	BETABAR	18.078	17.295	17.217	17.699	17.014	13.928	9.139	
	EPSILON	-1.170	-1.667	-2.968	-4.288	-5.457	-6.452	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	147.549	147.089	147.262	148.401	147.571	146.663	146.370	
	VZ-BAR	140.265	140.439	140.663	141.376	141.112	142.342	144.512	
	V-THET-BAR	45.787	43.727	43.588	45.116	43.179	35.301	23.248	
	MACH-BAR	0.442	0.440	0.441	0.445	0.442	0.439	0.438	
	U-WHEEL	192.254	197.977	209.423	220.870	232.316	243.763	249.486	
	V-BAR-PR	202.798	208.608	217.458	225.560	235.980	252.427	268.453	
	BETABAR-PR	46.239	47.681	49.694	51.186	53.273	55.671	57.431	
	V-THET-B-P	-146.467	-154.250	-165.835	-175.754	-189.137	-208.462	-226.237	
	MACH-BAR-P	0.607	0.625	0.651	0.676	0.707	0.756	0.804	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.360	12.652	12.964	12.936	12.935	12.620	12.309	12.815
ROTOR	T-TOTAL	310.36	310.46	311.48	310.81	310.89	311.61	312.37	311.08
	P-STATIC	9.556	9.629	9.798	9.957	10.103	10.228	10.284	
PR = 1.2718	BETABAR	51.086	47.208	45.874	45.081	44.014	44.247	43.718	
TR = 1.0795	EPSILON	-2.885	-2.428	-3.195	-4.409	-5.508	-6.270	-6.418	
EFF-A = 0.8953	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8977	V-BAR	210.236	216.339	219.338	212.100	206.327	191.002	177.264	
	VZ-BAR	132.059	146.968	152.712	149.764	148.384	136.823	128.117	
	V-THET-BAR	163.583	158.734	157.442	150.189	143.363	133.272	122.509	
	MACH-BAR	0.617	0.637	0.645	0.623	0.605	0.556	0.513	
	U-WHEEL	189.996	195.569	206.717	217.865	229.013	240.160	245.734	
	V-BAR-PR	134.675	151.521	160.477	168.358	171.340	173.636	177.759	
	BETABAR-PR	11.310	14.058	17.881	24.314	29.993	37.997	43.885	
	V-THET-B-P	-26.413	-36.835	-49.275	-67.676	-85.650	-106.888	-123.225	
	MACH-BAR-P	0.396	0.446	0.472	0.483	0.502	0.506	0.515	
	D-FACTOR	0.537	0.470	0.459	0.456	0.451	0.483	0.502	
	TURNING	34.9	33.6	31.8	26.9	23.3	17.7	13.5	
	INCID-B	-11.2	-8.4	-5.6	-4.4	-3.6	-3.0	-2.3	
	DEVIATION	23.2	17.8	9.3	6.6	4.8	6.8	10.0	
	OMEGABAR-P	0.227	0.126	0.075	0.063	0.060	0.150	0.225	
	LOSS PAR	0.078	0.044	0.027	0.023	0.022	0.052	0.073	
	PT-RATIO	1.231	1.260	1.288	1.281	1.282	1.252	1.221	1.2718
	EFF-AD	0.796	0.883	0.929	0.934	0.933	0.815	0.701	0.8953
	EFF-POLY	0.801	0.886	0.931	0.936	0.934	0.820	0.709	0.8977
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.360	12.647	12.962	12.936	12.937	12.624	12.309	12.815
	T-TOTAL	310.36	310.45	311.48	310.82	310.88	311.60	312.37	311.08
	P-STATIC	9.543	9.597	9.716	9.847	9.980	10.119	10.177	
	BETABAR	51.006	47.017	45.230	44.206	43.038	43.293	42.635	
	EPSILON	-0.113	-1.120	-2.691	-4.122	-5.445	-7.362	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	210.772	217.433	222.412	216.401	211.251	195.776	182.176	
	VZ-BAR	132.626	148.244	156.637	155.121	154.404	142.497	134.023	
	V-THET-BAR	163.814	159.037	157.898	150.885	144.174	134.249	123.393	
	MACH-BAR	0.619	0.640	0.655	0.637	0.620	0.571	0.528	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.985	12.304	12.732	12.716	12.742	12.045	11.154	12.504
ROTOR PLUS STATOR	T-TOTAL	310.36	310.46	311.48	310.80	310.90	311.69	312.37	311.08
	P-STATIC	10.752	10.757	10.753	10.731	10.698	10.646	10.618	
PR = 1.2410	BETABAR	13.214	12.843	12.341	12.717	12.053	8.532	5.377	
TR = 1.0795	EPSILON	0.450	-0.198	-1.514	-2.832	-4.141	-5.274	-5.489	
EFF-A = 0.8001	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8062	V-BAR	135.846	153.209	171.705	171.928	174.430	147.119	93.650	
	VZ-BAR	132.249	149.378	167.738	167.711	170.585	145.475	93.238	
	V-THET-BAR	31.053	34.048	36.699	37.846	36.423	21.891	8.775	
IGV,ROTOR,STATOR	MACH-BAR	0.390	0.442	0.497	0.498	0.506	0.423	0.266	
	EFF-POLY	0.776	0.804	0.848	0.834	0.816	0.513	0.300	
PR = 1.2342	INCID-B	-4.7	-5.6	-5.6	-6.3	-8.5	-10.3	-12.1	
TR = 1.0795	DEVIATION	12.4	11.5	11.5	12.4	12.7	10.5	8.3	
EFF-A = 0.7802	OMEGA-BAR	0.148	0.112	0.071	0.071	0.066	0.231	0.542	
EFF-P = 0.7859	LOSS PAR	0.051	0.040	0.026	0.028	0.027	0.099	0.238	
	D-FACTOR	0.579	0.505	0.437	0.415	0.388	0.495	0.768	
	TURNING	37.8	34.2	32.9	31.5	31.0	34.8	37.3	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 68)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.303	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3045.0	P-STATIC	9.588	9.588	9.591	9.596	9.605	9.616	9.623	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.876	-2.514	-4.101	-5.698	-7.234	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	95.165	95.126	94.879	94.388	93.619	92.573	91.925	
	VZ-BAR	95.165	95.126	94.879	94.388	93.619	92.573	91.925	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.282	0.282	0.281	0.279	0.277	0.274	0.272	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.045	10.048	10.064	10.098	10.095	10.086	10.080	10.079
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.240	9.247	9.262	9.280	9.297	9.314	9.322	
	BETABAR	20.553	21.189	21.559	21.436	20.487	16.289	9.905	
	EPSILON	-0.000	-0.668	-2.459	-4.032	-5.634	-7.241	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	116.881	116.544	116.484	117.464	115.958	114.099	113.120	
	VZ-BAR	109.442	108.664	108.335	109.339	108.623	109.505	111.438	
	V-THET-BAR	41.033	42.123	42.804	42.928	40.584	32.002	19.458	
	MACH-BAR	0.348	0.346	0.346	0.349	0.345	0.339	0.336	
	INCID-B	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.5	-2.6	-3.6	-5.1	-7.4	-13.0	-20.0	
	OMEGABAR	0.159	0.154	0.128	0.063	0.070	0.089	0.101	
	TURNING	-20.6	-21.2	-21.6	-21.4	-20.5	-16.3	-9.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.045	10.048	10.065	10.098	10.094	10.086	10.080	10.079
WCOR= 1.310	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3045.0	P-STATIC	8.792	8.802	8.815	8.826	8.835	8.841	8.840	
	BETABAR	16.190	16.816	17.306	17.392	16.637	13.199	8.052	
	EPSILON	-1.170	-1.577	-2.837	-4.152	-5.417	-6.404	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	147.053	146.597	146.677	147.833	147.069	146.275	145.962	
	VZ-BAR	141.222	140.328	140.037	141.074	140.911	142.352	144.523	
	V-THET-BAR	41.001	42.411	43.633	44.188	42.107	33.387	20.446	
	MACH-BAR	0.440	0.439	0.439	0.443	0.440	0.438	0.437	
	U-WHEEL	194.211	199.992	211.555	223.118	234.681	246.244	252.025	
	V-BAR-FR	208.366	211.008	218.652	227.857	238.625	256.074	272.976	
	BETABAR-FR	47.332	48.314	50.173	51.746	53.805	56.228	58.033	
	V-THET-R-F	-153.211	-157.581	-167.922	-178.930	-192.574	-212.857	-231.579	
	MACH-BAR-F	0.624	0.632	0.655	0.682	0.714	0.767	0.817	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.380	12.726	13.083	13.080	13.090	12.783	12.593	12.951
ROTOR	T-TOTAL	311.02	311.31	311.94	311.19	311.53	312.61	313.49	311.74
-----	P-STATIC	9.785	9.871	10.050	10.217	10.360	10.478	10.537	
PR = 1.2849	BETABAR	53.032	50.079	47.989	46.565	45.738	46.240	44.155	
TR = 1.0818	EPSILON	-2.886	-2.586	-3.041	-4.189	-5.433	-6.231	-6.418	
EFF-A = 0.9090	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.9108	V-BAR	201.540	209.227	213.287	206.415	201.138	186.233	176.865	
	VZ-BAR	121.200	134.274	142.745	141.915	140.384	128.806	126.693	
	V-THET-BAR	161.025	160.443	158.476	149.890	144.044	134.506	123.204	
	MACH-BAR	0.589	0.613	0.625	0.605	0.588	0.540	0.511	
	U-WHEEL	191.930	197.560	208.821	220.082	231.343	242.605	248.235	
	V-BAR-IR	125.078	139.312	151.376	158.337	165.327	168.168	178.142	
	BETABAR-FR	14.305	15.445	19.423	26.314	31.875	40.002	44.577	
	V-THET-R-F	-30.905	-37.116	-50.345	-70.192	-87.299	-108.099	-125.031	
	MACH-BAR-F	0.366	0.408	0.444	0.464	0.483	0.488	0.515	
	D-FACTOR	0.599	0.539	0.505	0.488	0.485	0.517	0.514	
	TURNING	33.0	32.9	30.8	25.4	21.9	16.2	13.5	
	INCID-R	-10.1	-7.8	-5.1	-3.8	-3.1	-2.4	-1.7	
	DEVIATION	26.2	19.2	10.8	8.6	6.7	8.8	10.7	
	OMEGABAR-F	0.243	0.141	0.059	0.038	0.043	0.142	0.194	
	LOSS PAR	0.082	0.049	0.021	0.014	0.015	0.048	0.062	
	PT-RATIO	1.232	1.267	1.300	1.295	1.297	1.268	1.249	1.2849
	EFF-AD	0.777	0.870	0.948	0.961	0.952	0.827	0.748	0.9090
	EFF-POLY	0.783	0.874	0.945	0.962	0.953	0.832	0.755	0.9108
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.380	12.720	13.081	13.079	13.092	12.787	12.593	12.951
	T-TOTAL	311.02	311.31	311.95	311.20	311.51	312.60	313.49	311.74
	P-STATIC	9.797	9.851	9.977	10.117	10.251	10.383	10.447	
	BETABAR	53.338	49.985	47.381	45.721	44.805	45.360	43.300	
	EPSILON	-0.113	-0.864	-2.587	-4.258	-5.824	-7.297	-7.979	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	201.020	209.861	216.053	210.315	205.536	190.422	180.942	
	VZ-BAR	120.028	134.947	146.291	146.832	145.829	133.799	131.685	
	V-THET-BAR	161.252	160.700	158.987	150.574	144.840	135.493	124.093	
	MACH-BAR	0.588	0.615	0.634	0.617	0.601	0.553	0.523	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.016	12.430	12.870	12.893	12.914	12.299	11.549	12.678
ROTOR PLUS STATOR	T-TOTAL	311.02	311.31	311.94	311.19	311.55	312.69	313.49	311.74
----------	P-STATIC	11.005	11.010	11.008	10.988	10.959	10.911	10.884	
PR = 1.2579	BETABAR	12.433	12.884	12.770	13.164	13.155	9.595	5.526	
TR = 1.0818	EPSILON	0.450	-0.233	-1.573	-2.861	-4.095	-5.255	-5.489	
EFF-A = 0.8261	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8336	V-BAR	124.465	145.883	165.417	167.078	169.375	145.268	102.913	
	VZ-BAR	121.546	142.209	161.326	162.687	164.930	143.222	102.435	
	V-THET-BAR	26.797	32.535	36.562	38.051	38.549	24.259	9.909	
IGV,ROTOR,STATOR	MACH-BAR	0.356	0.420	0.478	0.483	0.490	0.417	0.292	
----------	EFF-POLY	0.794	0.827	0.857	0.851	0.824	0.553	0.321	
PR = 1.2514	INCID-B	-2.3	-2.7	-3.4	-4.8	-6.7	-8.3	-11.5	
TR = 1.0818	DEVIATION	11.7	11.6	11.9	12.8	13.8	11.6	8.5	
EFF-A = 0.8104	OMEGA-BAR	0.141	0.101	0.068	0.063	0.062	0.203	0.486	
EFF-P = 0.8148	LOSS PAR	0.049	0.036	0.025	0.024	0.025	0.087	0.214	
	D-FACTOR	0.618	0.527	0.451	0.420	0.393	0.489	0.714	
	TURNING	40.9	37.1	34.6	32.6	31.6	35.8	37.8	

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Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 69)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.278	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3047.8	P-STATIC	9.597	9.598	9.601	9.606	9.615	9.626	9.633	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.876	-2.534	-4.164	-5.735	-7.286	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	94.281	94.242	93.999	93.488	92.705	91.655	91.017	
	VZ-BAR	94.281	94.242	93.999	93.488	92.705	91.655	91.017	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.279	0.279	0.278	0.277	0.274	0.271	0.269	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.052	10.054	10.068	10.100	10.097	10.089	10.083	10.083
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.271	9.279	9.295	9.312	9.328	9.344	9.352	
	BETABAR	22.576	21.654	21.404	21.710	20.645	17.851	11.338	
	EPSILON	-0.000	-0.848	-2.492	-4.116	-5.718	-7.286	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	114.961	114.524	114.318	115.272	113.791	111.972	110.980	
	VZ-BAR	106.152	106.442	106.433	107.095	106.483	106.571	108.814	
	V-THET-BAR	44.135	42.260	41.719	42.639	40.120	34.324	21.819	
	MACH-BAR	0.342	0.340	0.340	0.343	0.338	0.333	0.330	
	INCID-P	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-0.5	-2.1	-3.7	-4.8	-7.2	-11.4	-18.6	
	OMEGABAR	0.150	0.145	0.120	0.060	0.067	0.085	0.097	
	TURNING	-22.6	-21.7	-21.4	-21.7	-20.6	-17.9	-11.3	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.052	10.054	10.069	10.100	10.097	10.088	10.083	10.083
WCOR= 1.285	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3047.8	P-STATIC	8.846	8.856	8.869	8.879	8.887	8.893	8.893	
	BETABAR	17.826	17.221	17.240	17.658	16.821	14.495	9.236	
	EPSILON	-1.170	-1.537	-2.808	-4.096	-5.383	-6.370	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	144.059	143.559	143.562	144.681	143.949	143.132	142.843	
	VZ-BAR	137.143	137.123	137.112	137.865	137.790	138.569	140.991	
	V-THET-BAR	44.100	42.502	42.547	43.886	41.657	35.823	22.927	
	MACH-BAR	0.431	0.429	0.429	0.433	0.431	0.428	0.427	
	U-WHEEL	194.385	200.171	211.744	223.317	234.891	246.464	252.251	
	V-BAR-PR	203.455	208.958	217.780	226.281	237.332	252.135	269.199	
	BETABAR-PR	47.618	48.985	50.979	52.462	54.507	56.659	58.416	
	V-THET-B-P	-150.285	-157.669	-169.197	-179.431	-193.234	-210.641	-229.324	
	MACH-BAR-P	0.609	0.625	0.651	0.677	0.710	0.754	0.805	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.431	12.811	13.167	13.168	13.224	12.943	12.836	13.064
ROTOR	T-TOTAL	311.79	311.88	312.49	311.92	312.34	313.66	314.68	312.50
-----	P-STATIC	9.892	9.996	10.183	10.353	10.506	10.633	10.702	
PR = 1.2957	BETABAR	57.679	52.127	49.320	48.499	47.425	49.644	46.799	
TR = 1.0844	EPSILON	-2.886	-2.548	-2.957	-4.223	-5.289	-6.152	-6.418	
EFF-A = 0.9114	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.9130	V-BAR	198.943	207.077	210.809	204.020	199.788	185.538	178.908	
	VZ-BAR	106.367	127.132	137.412	135.190	135.169	120.142	122.474	
	V-THET-BAR	168.120	163.416	159.869	152.798	147.120	141.388	130.416	
	MACH-BAR	0.581	0.606	0.617	0.596	0.583	0.537	0.516	
	U-WHEEL	192.101	197.736	209.008	220.279	231.550	242.822	248.457	
	V-BAR-PR	109.037	131.690	145.947	151.106	159.382	157.247	170.099	
	BETABAR-PR	12.705	15.087	19.673	26.521	31.991	40.171	43.948	
	V-THET-B-P	-23.981	-34.320	-49.139	-67.481	-84.431	-101.434	-118.042	
	MACH-BAR-P	0.318	0.385	0.427	0.442	0.465	0.455	0.491	
	D-FACTOR	0.675	0.575	0.532	0.522	0.513	0.559	0.545	
	TURNING	34.9	33.9	31.3	25.9	22.5	16.5	14.5	
	INCID-R	-9.8	-7.1	-4.3	-3.1	-2.4	-2.0	-1.4	
	DEVIATION	24.6	18.8	11.1	8.9	6.8	9.0	10.1	
	OMEGABAR-P	0.275	0.145	0.060	0.044	0.041	0.145	0.183	
	LOSS PAR	0.094	0.050	0.021	0.016	0.015	0.049	0.059	
	PT-RATIO	1.237	1.274	1.308	1.304	1.310	1.283	1.273	1.2957
	EFF-AD	0.764	0.872	0.945	0.956	0.956	0.835	0.777	0.9114
	EFF-POLY	0.770	0.876	0.946	0.957	0.957	0.840	0.784	0.9130
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.431	12.806	13.165	13.167	13.226	12.946	12.836	13.064
	T-TOTAL	311.79	311.87	312.49	311.93	312.32	313.64	314.68	312.50
	P-STATIC	9.917	9.987	10.123	10.261	10.400	10.533	10.602	
	BETABAR	58.287	52.219	48.817	47.683	46.432	48.585	45.759	
	EPSILON	-0.113	-1.120	-2.570	-3.916	-5.293	-7.201	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	197.908	207.252	213.062	207.578	204.085	189.870	183.353	
	VZ-BAR	104.035	126.978	140.292	139.746	140.659	125.599	127.920	
	V-THET-BAR	168.358	163.744	160.353	153.490	147.870	142.391	131.357	
	MACH-BAR	0.577	0.606	0.624	0.607	0.596	0.551	0.530	
STATOR TRAILING EDGE	DIAMETPR	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.127	12.536	12.973	13.019	13.034	12.530	11.975	12.814
ROTOR PLUS STATOR	T-TOTAL	311.79	311.88	312.49	311.92	312.35	313.70	314.68	312.50
----------	P-STATIC	11.218	11.222	11.221	11.204	11.177	11.134	11.109	
PR = 1.2709	BETABAR	12.344	12.891	13.172	13.715	13.629	11.045	6.889	
TR = 1.0844	EPSILON	0.450	-0.259	-1.565	-2.805	-3.966	-5.127	-5.489	
EFF-A = 0.8396	K-BAR	0.925	0.925	0.925	0.925	0.925	0.925	0.925	
EFF-P = 0.8450	V-BAR	117.461	139.528	159.647	162.220	164.214	144.648	115.825	
	VZ-BAR	114.746	136.009	155.447	157.594	159.590	141.969	114.988	
	V-THET-BAR	25.111	31.137	36.380	38.462	38.654	27.711	13.892	
IGV,ROTOR,STATOR	MACH-BAR	0.336	0.400	0.460	0.468	0.474	0.414	0.329	
----------	EFF-POLY	0.831	0.843	0.874	0.885	0.827	0.623	0.402	
PR = 1.2648	INCID-R	2.6	-0.4	-2.0	-2.8	-5.1	-5.0	-9.0	
TR = 1.0844	DEVIATION	11.6	11.6	12.3	13.4	14.3	13.0	9.8	
EFF-A = 0.8241	OMEGA-BAR	0.121	0.096	0.063	0.051	0.068	0.172	0.385	
EFF-P = 0.8280	LOSS PAR	0.042	0.034	0.023	0.020	0.027	0.073	0.169	
	D-FACTOR	0.663	0.560	0.474	0.441	0.420	0.502	0.655	
	TURNING	45.9	39.3	35.6	34.0	32.8	37.5	38.9	

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Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 70)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.237	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3057.5	P-STATIC	9.644	9.644	9.647	9.652	9.660	9.670	9.676	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.876	-2.545	-4.164	-5.735	-7.284	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	90.022	89.987	89.754	89.268	88.522	87.526	86.919	
	VZ-BAR	90.022	89.987	89.754	89.268	88.522	87.526	86.919	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.266	0.266	0.266	0.264	0.262	0.259	0.257	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1419	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.061	10.063	10.074	10.103	10.100	10.093	10.087	10.088
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.355	9.363	9.377	9.392	9.406	9.421	9.427	
	BETABAR	22.994	21.576	21.082	21.405	20.639	17.306	12.377	
	EPSILON	-0.000	-0.848	-2.495	-4.122	-5.700	-7.278	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	109.104	108.660	108.347	109.346	107.951	106.224	105.290	
	VZ-BAR	100.435	101.045	101.095	101.803	101.022	101.408	102.843	
	V-THET-BAR	42.620	39.957	38.972	39.907	38.051	31.599	22.569	
	MACH-BAR	0.324	0.323	0.322	0.325	0.320	0.315	0.312	
	INCID-B	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-0.1	-2.2	-4.1	-5.1	-7.2	-11.9	-17.5	
	OMEGABAR	0.744	0.140	0.119	0.059	0.066	0.084	0.097	
	TURNING	-23.0	-21.6	-21.1	-21.4	-20.6	-17.3	-12.4	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.061	10.063	10.074	10.104	10.100	10.093	10.087	10.088
WCOR= 1.243	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3057.5	P-STATIC	8.977	8.987	8.997	9.006	9.013	9.018	9.018	
	BETABAR	18.222	17.219	17.036	17.479	16.862	14.108	10.112	
	EPSILON	-1.170	-1.447	-2.747	-4.086	-5.383	-6.426	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	136.190	135.704	135.644	136.808	136.126	135.358	135.073	
	VZ-BAR	129.361	129.621	129.692	130.491	130.273	131.270	132.975	
	V-THET-BAR	42.587	40.173	39.740	41.091	39.485	32.992	23.715	
	MACH-BAR	0.407	0.405	0.405	0.409	0.406	0.404	0.403	
	U-WHEEL	195.006	200.811	212.421	224.031	235.641	247.252	253.057	
	V-BAR-ER	199.915	206.416	215.961	224.713	235.477	251.277	265.103	
	BETABAR-ER	49.678	51.097	53.091	54.499	56.409	58.504	59.894	
	V-THET-B-P	-152.420	-160.638	-172.680	-182.980	-196.156	-214.260	-229.342	
	MACH-BAR-P	0.597	0.616	0.645	0.671	0.703	0.750	0.791	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.532	12.947	13.355	13.335	13.370	13.175	12.988	13.239
ROTOR	T-TOTAL	312.66	312.36	313.08	312.45	312.96	314.74	316.12	313.18
-----	P-STATIC	10.204	10.302	10.490	10.660	10.812	10.949	11.016	
PR = 1.3124	BETABAR	64.416	55.074	51.141	50.421	49.907	52.216	53.116	
TR = 1.0868	EPSILON	-2.885	-2.330	-2.934	-4.133	-5.217	-6.140	-6.418	
EFF-A = 0.9326	K-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
EFF-P = 0.9332	V-BAR	189.274	199.149	204.769	197.247	192.409	180.461	170.881	
	VZ-BAR	81.734	114.023	128.472	125.673	123.918	110.568	102.561	
	V-THET-BAR	170.717	163.182	159.452	152.028	147.191	142.621	136.680	
	MACH-BAR	0.550	0.581	0.597	0.575	0.559	0.521	0.491	
	U-WHEEL	192.715	198.368	209.676	220.983	232.290	243.598	249.251	
	V-BAR-ER	84.642	119.334	137.953	143.359	150.336	149.746	152.286	
	BETABAR-ER	15.064	17.119	21.347	28.749	34.478	42.404	47.664	
	V-THET-B-P	-21.998	-35.186	-50.224	-68.955	-85.099	-100.977	-112.571	
	MACH-BAR-P	0.246	0.348	0.403	0.418	0.437	0.432	0.437	
	D-FACTOR	0.799	0.633	0.569	0.557	0.552	0.595	0.615	
	TURNING	38.6	38.0	31.7	25.8	21.9	16.1	12.2	
	INCID-B	-7.7	-5.0	-2.2	-1.1	-0.5	-0.1	0.1	
	DEVIATION	26.9	20.9	12.7	11.1	9.3	11.2	13.8	
	OMEGABAR-P	0.296	0.131	0.033	0.021	0.029	0.130	0.201	
	LOSS PAR	0.100	0.045	0.012	0.007	0.010	0.042	0.061	
	PT-RATIO	1.246	1.287	1.326	1.320	1.324	1.306	1.288	1.3124
	EFF-AD	0.763	0.890	0.971	0.980	0.971	0.859	0.773	0.9326
	EFF-POLY	0.769	0.893	0.972	0.980	0.971	0.864	0.780	0.9332
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.532	12.942	13.353	13.335	13.371	13.179	12.988	13.239
	T-TOTAL	312.66	312.36	313.08	312.46	312.94	314.71	316.12	313.18
	P-STATIC	10.221	10.297	10.438	10.580	10.722	10.861	10.926	
	BETABAR	65.091	55.259	50.685	49.646	48.995	51.760	51.883	
	EPSILON	-0.113	-1.331	-2.543	-3.750	-5.435	-7.028	-7.979	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	188.492	199.155	206.735	200.379	196.051	184.362	174.980	
	VZ-BAR	79.388	113.501	130.982	129.747	128.634	115.626	108.009	
	V-THET-BAR	170.958	163.535	159.946	152.700	147.949	143.596	137.667	
	MACH-BAR	0.547	0.581	0.604	0.584	0.570	0.533	0.503	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.281	12.661	13.102	13.143	13.142	12.766	12.425	12.964
ROTOR PLUS STATOR	T-TOTAL	312.66	312.36	313.08	312.45	312.96	314.76	316.12	313.18
----------	P-STATIC	11.516	11.520	11.520	11.506	11.483	11.447	11.425	
PR = 1.2852	BETABAR	18.605	14.015	13.610	14.095	13.777	12.077	9.643	
TR = 1.0868	EPSILON	0.450	-0.353	-1.566	-2.745	-3.859	-4.988	-5.489	
EFF-A = 0.8561	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8612	V-BAR	106.968	129.128	150.644	153.007	154.238	139.322	122.646	
	VZ-BAR	103.511	125.287	146.414	148.400	149.800	136.237	120.914	
	V-THET-BAR	26.973	31.259	35.448	37.262	36.732	29.153	20.543	
IGV,ROTOR,STATOR	MACH-BAR	0.305	0.369	0.433	0.440	0.443	0.398	0.348	
----------	EFF-POLY	0.854	0.835	0.837	0.852	0.795	0.618	0.501	
PR = 1.2796	INCID-B	9.4	2.6	-0.1	-0.9	-2.5	-2.5	-2.9	
TR = 1.0868	DEVIATION	13.8	12.7	12.7	13.7	14.4	14.1	12.6	
EFF-A = 0.8432	OMEGA-BAR	0.108	0.106	0.086	0.069	0.086	0.178	0.273	
EFF-P = 0.8463	LOSS PAR	0.037	0.037	0.032	0.027	0.035	0.075	0.119	
	D-FACTOR	0.703	0.594	0.502	0.468	0.452	0.516	0.599	
	TURNING	50.5	41.2	37.1	35.6	35.2	39.1	42.2	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 71)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.169	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3043.6	P-STATIC	9.699	9.699	9.701	9.706	9.713	9.722	9.727	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.910	-2.567	-4.176	-5.782	-7.288	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	84.703	84.667	84.437	83.987	83.293	82.366	81.801	
	VZ-BAR	84.703	84.667	84.437	83.987	83.293	82.366	81.801	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.250	0.250	0.250	0.248	0.246	0.243	0.242	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.075	10.076	10.082	10.108	10.105	10.098	10.094	10.095
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.450	9.455	9.466	9.480	9.493	9.505	9.511	
	BETABAR	19.334	20.642	21.392	21.399	20.610	18.316	13.696	
	EPSILON	-0.000	-0.887	-2.525	-4.103	-5.702	-7.282	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	102.431	102.149	101.638	102.542	101.259	99.644	98.732	
	VZ-BAR	96.654	95.590	94.636	95.473	94.778	94.590	95.924	
	V-THET-BAR	33.913	36.010	37.072	37.413	35.644	31.315	23.377	
	MACH-BAR	0.304	0.303	0.301	0.304	0.300	0.295	0.293	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-3.7	-3.1	-3.7	-5.1	-7.3	-10.9	-16.2	
	OMEGABAR	0.132	0.128	0.115	0.055	0.062	0.081	0.093	
	TURNING	-19.3	-20.6	-21.4	-21.4	-20.6	-18.3	-13.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.075	10.076	10.082	10.108	10.105	10.098	0.094	10.095
NCOR= 1.173	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	[illegible] 7	288.17
NCOR= 3043.6	P-STATIC	9.119	9.126	9.134	9.143	9.152	9.158	[illegible]9	
	BETABAR	15.413	16.575	17.322	17.517	16.921	15.025	11.24[illegible]	
	EPSILON	-1.170	-1.485	-3.042	-4.715	-6.103	-6.944	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	127.498	127.115	126.899	127.919	127.140	126.247	125.921	
	VZ-BAR	122.912	121.833	121.144	121.987	121.635	121.928	123.502	
	V-THET-BAR	33.886	36.260	37.784	38.501	37.005	32.729	24.564	
	MACH-BAR	0.380	0.379	0.378	0.381	0.379	0.376	0.375	
	U-WHEEL	194.118	199.896	211.453	223.011	234.568	246.125	251.904	
	V-BAR-PR	201.945	204.011	211.748	221.190	232.007	245.775	258.720	
	BETABAR-PR	52.509	53.330	55.101	56.529	58.379	60.256	61.487	
	V-THET-B-P	-160.232	-163.635	-173.669	-184.509	-197.563	-213.397	-227.340	
	MACH-BAR-P	0.602	0.608	0.631	0.659	0.691	0.732	0.771	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.715	13.165	13.571	13.421	13.320	13.208	12.988	13.338
ROTOR	T-TOTAL	313.73	313.36	313.83	312.82	313.25	315.52	317.99	313.78
-----	P-STATIC	10.386	10.481	10.679	10.853	10.996	11.129	11.193	
PR = 1.3213	BETABAR	63.309	55.731	52.400	52.081	53.134	56.777	63.298	
TR = 1.0889	EPSILON	-2.885	-2.035	-2.998	-4.472	-5.800	-6.578	-6.418	
EFF-A = 0.9350	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9349	V-BAR	188.134	199.255	204.275	192.353	183.187	173.979	163.054	
	VZ-BAR	84.505	112.212	124.636	118.210	109.903	95.334	73.269	
	V-THET-BAR	168.086	164.598	161.845	151.744	146.556	145.511	145.665	
	MACH-BAR	0.545	0.580	0.595	0.559	0.531	0.501	0.466	
	U-WHEEL	191.837	197.465	208.720	219.976	231.232	242.488	248.116	
	V-BAR-PR	87.779	116.927	133.176	136.506	138.741	136.023	125.955	
	BETABAR-PR	15.699	16.311	20.607	29.992	37.613	45.501	58.429	
	V-THET-B-P	-23.751	-32.866	-46.876	-68.232	-84.676	-96.977	-102.451	
	MACH-BAR-P	0.254	0.340	0.388	0.397	0.402	0.391	0.360	
	D-FACTOR	0.796	0.651	0.591	0.587	0.600	0.650	0.721	
	TURNING	36.8	37.0	34.5	26.5	20.8	14.8	7.1	
	INCID-M	-4.9	-2.8	-0.2	1.0	1.5	1.6	1.7	
	DEVIATION	27.6	20.1	12.0	12.3	12.4	14.3	20.6	
	OMEGABAR-P	0.287	0.115	0.006	0.015	0.056	0.154	0.269	
	LOSS PAR	0.097	0.040	0.002	0.005	0.019	0.047	0.070	
	PT-RATIO	1.262	1.307	1.346	1.328	1.318	1.308	1.287	1.3213
	EFF-AD	0.776	0.909	0.995	0.986	0.944	0.881	0.722	0.9350
	EFF-POLY	0.782	0.911	0.995	0.986	0.946	0.896	0.731	0.9349
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.715	13.155	13.570	13.427	13.322	13.212	12.988	13.338
	T-TOTAL	313.73	313.36	313.84	312.84	313.23	315.46	317.99	313.78
	P-STATIC	10.390	10.472	10.639	10.790	10.923	11.047	11.109	
	BETABAR	63.574	55.868	52.090	51.427	52.234	55.482	61.457	
	EPSILON	-0.113	-1.325	-2.715	-3.897	-5.195	-6.712	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	187.965	199.273	205.787	195.073	186.291	177.721	167.015	
	VZ-BAR	83.652	111.829	126.439	121.631	114.093	100.715	79.803	
	V-THET-BAR	168.324	164.878	162.361	152.570	147.264	146.414	146.716	
	MACH-BAR	0.545	0.580	0.600	0.568	0.540	0.512	0.478	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.353	12.818	13.220	13.133	13.035	12.811	12.449	12.996
ROTOR PLUS STATOR	T-TOTAL	313.73	313.36	313.85	312.87	313.18	315.29	317.99	313.78
----------	P-STATIC	11.670	11.675	11.674	11.658	11.636	11.608	11.590	
PR = 1.2874	BETABAR	13.672	13.697	13.583	13.772	13.257	11.451	8.891	
TR = 1.0889	EPSILON	.0.450	-0.352	-1.358	-2.332	-3.372	-4.555	-5.489	
EFF-A = 0.8422	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8477	V-BAR	100.813	128.578	148.392	145.072	141.682	132.655	113.634	
	VZ-BAR	97.956	124.922	144.242	140.901	137.906	130.013	112.269	
	V-THET-BAR	23.828	30.447	34.851	34.536	32.491	26.339	17.562	
IGV,ROTOR,STATOR	MACH-BAR	0.286	0.367	0.425	0.416	0.406	0.378	0.321	
----------	EFF-POLY	0.800	0.806	0.779	0.774	0.747	0.630	0.499	
PR = 1.2827	INCID-M	7.9	3.2	1.3	0.9	0.7	1.9	6.7	
TR = 1.0889	DEVIATION	12.9	12.4	12.7	13.4	13.9	13.4	11.8	
EFF-A = 0.8327	OMEGA-BAR	0.156	0.126	0.119	0.111	0.120	0.185	0.287	
EFF-P = 0.8355	LOSS PAR	0.054	0.044	0.044	0.043	0.048	0.078	0.125	
	D-FACTOR	0.736	0.601	0.516	0.501	0.499	0.551	0.666	
	TURNING	49.9	42.2	38.5	37.7	39.0	44.0	52.6	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 72)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.151	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3054.9	P-STATIC	9.712	9.713	9.715	9.719	9.726	9.735	9.740	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.872	-2.536	-4.145	-5.764	-7.258	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	83.355	83.320	83.102	82.665	81.985	81.075	80.515	
	VZ-BAR	83.355	83.320	83.102	82.665	81.985	81.075	80.515	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.246	0.246	0.246	0.244	0.242	0.240	0.238	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.078	10.079	10.084	10.109	10.107	10.100	10.095	10.096
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.469	9.475	9.487	9.500	9.512	9.525	9.530	
	BETABAR	22.726	21.432	21.226	21.480	20.598	18.161	13.690	
	EPSILON	-0.000	-0.846	-2.500	-4.067	-5.698	-7.275	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	101.089	100.660	100.050	100.951	99.673	98.075	97.178	
	VZ-BAR	93.241	93.699	93.270	93.939	93.301	93.184	94.417	
	V-THET-BAR	39.053	36.780	36.226	36.965	35.066	30.568	23.000	
	MACH-BAR	0.300	0.298	0.297	0.299	0.295	0.291	0.288	
	INCID-P	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-0.4	-2.3	-3.9	-5.0	-7.3	-11.1	-16.2	
	OMEGABAR	0.128	0.125	0.114	0.055	0.061	0.080	0.093	
	TURNING	-22.7	-21.4	-21.2	-21.5	-20.6	-18.2	-13.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.078	10.079	10.084	10.109	10.106	10.100	10.095	10.096
WCOR= 1.155	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3054.9	P-STATIC	9.150	9.158	9.166	9.174	9.183	9.190	9.190	
	BETABAR	18.116	17.203	17.214	17.603	16.924	14.909	11.257	
	EPSILON	-1.170	-1.327	-2.958	-4.741	-6.155	-7.081	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	125.497	125.041	124.801	125.604	125.034	124.119	123.803	
	VZ-BAR	119.276	119.446	119.210	119.913	119.619	119.937	121.421	
	V-THET-BAR	39.022	36.983	36.933	38.046	36.399	31.933	24.168	
	MACH-BAR	0.374	0.372	0.372	0.375	0.372	0.370	0.369	
	U-WHEEL	194.839	200.635	212.239	223.839	235.440	247.040	252.840	
	V-BAR-R	196.229	202.612	212.000	221.131	232.221	246.286	258.909	
	BETABAR-R	52.566	53.874	55.783	57.160	58.994	60.856	62.033	
	V-THET-B-R	-155.817	-163.656	-175.306	-185.793	-199.041	-215.107	-228.672	
	MACH-BAR-R	0.584	0.603	0.631	0.659	0.692	0.733	0.771	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.765	13.172	13.638	13.513	13.390	13.262	12.968	13.402
ROTOR	T-TOTAL	313.96	313.69	314.15	313.46	313.66	316.14	318.42	314.23
-----	P-STATIC	10.411	10.511	10.712	10.884	11.027	11.160	11.225	
PR = 1.3274	BETABAR	67.053	57.307	52.168	52.321	52.988	57.120	65.732	
TR = 1.0904	EPSILON	-2.885	-2.119	-2.876	-4.492	-5.865	-6.617	-6.418	
EFF-A = 0.9347	K-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
EFF-P = 0.9346	V-BAR	188.924	198.327	205.116	198.296	184.399	174.773	160.748	
	VZ-BAR	73.657	107.132	125.806	118.761	111.005	94.903	66.068	
	V-THET-BAR	173.973	166.792	162.004	153.776	147.244	146.719	146.543	
	MACH-BAR	0.548	0.577	0.597	0.565	0.534	0.503	0.459	
	U-WHEEL	192.550	198.198	209.496	220.794	232.092	243.389	249.038	
	V-BAR-IR	75.964	111.646	134.485	136.382	139.720	135.528	121.943	
	BETABAR-IR	14.155	16.303	20.677	29.435	37.392	45.554	57.194	
	V-THET-R-R	-18.577	-31.407	-47.492	-67.018	-88.847	-96.670	-102.495	
	MACH-BAR-R	0.220	0.325	0.392	0.396	0.405	0.390	0.348	
	D-FACTOR	0.851	0.676	0.587	0.592	0.599	0.657	0.739	
	TURNING	38.4	37.6	35.1	27.7	21.6	15.3	4.8	
	INCID-R	-4.6	-2.3	0.5	1.6	2.1	2.2	2.3	
	DEVIATION	26.0	20.0	12.1	11.8	12.2	14.3	23.3	
	OMEGABAR-R	0.296	0.133	0.001	0.016	0.058	0.162	0.287	
	LOSS PAR	0.101	0.046	0.000	0.006	0.018	0.050	0.070	
	PT-RATIO	1.267	1.307	1.352	1.337	1.325	1.313	1.285	1.3274
	EFF-AD	0.781	0.898	0.999	0.985	0.947	0.835	0.707	0.9347
	EFF-POLY	0.768	0.901	0.999	0.985	0.948	0.840	0.717	0.9346
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.765	13.163	13.635	13.519	13.391	13.269	12.968	13.402
	T-TOTAL	313.96	313.69	314.16	313.48	313.63	316.08	318.42	314.23
	P-STATIC	10.404	10.492	10.667	10.825	10.962	11.085	11.147	
	BETABAR	67.038	57.281	51.799	51.725	52.252	55.914	63.809	
	EPSILON	-0.113	-1.325	-2.850	-3.812	-5.174	-6.705	-7.979	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	189.212	198.818	206.774	196.846	187.125	178.290	164.490	
	VZ-BAR	73.816	107.473	127.871	121.934	114.557	99.935	72.601	
	V-THET-BAR	174.219	167.151	162.493	154.533	147.960	147.619	147.601	
	MACH-BAR	0.548	0.578	0.603	0.572	0.542	0.513	0.470	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.425	12.885	13.273	13.175	13.060	12.848	12.473	13.039
ROTOR PLUS STATOR	T-TOTAL	313.96	313.69	314.16	313.49	313.59	315.86	318.42	314.23
----------	P-STATIC	11.727	11.732	11.731	11.715	11.694	11.666	11.648	
PR = 1.2915	BETABAR	16.385	15.076	13.784	13.611	12.842	10.882	8.253	
TR = 1.0904	EPSILON	0.450	-0.517	-1.479	-2.390	-3.364	-4.501	-5.489	
EFF-A = 0.8383	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8441	V-BAR	101.676	128.908	147.936	144.190	139.911	131.370	111.283	
	VZ-BAR	97.547	124.477	143.675	140.093	136.811	129.007	110.131	
	V-THET-BAR	28.682	33.500	35.246	33.919	31.097	24.803	15.974	
IGV,ROTOR,STATOR	MACH-BAR	0.289	0.368	0.424	0.413	0.400	0.374	0.314	
----------	EFF-POLY	0.815	0.838	0.778	0.751	0.723	0.631	0.530	
PR = 1.2870	INCID-R	11.4	4.6	1.0	1.2	0.7	2.3	9.0	
TR = 1.0904	DEVIATION	15.6	13.8	12.9	13.3	13.5	12.9	11.2	
EFF-A = 0.8295	OMEGA-BAR	0.144	0.104	0.122	0.128	0.136	0.193	0.272	
EFF-P = 0.8326	LOSS PAR	0.049	0.037	0.045	0.049	0.055	0.082	0.119	
	D-FACTOR	0.735	0.598	0.520	0.515	0.516	0.568	0.682	
	TURNING	50.7	42.2	38.0	38.1	39.4	45.0	55.6	

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Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 73)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.078	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3042.2	P-STATIC	9.766	9.767	9.769	9.772	9.778	9.786	9.791	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.881	-2.555	-4.164	-5.758	-7.265	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	77.706	77.677	77.472	77.063	76.427	75.573	75.047	
	VZ-BAR	77.706	77.677	77.472	77.063	76.427	75.573	75.047	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.229	0.229	0.229	0.228	0.226	0.223	0.222	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.088	10.089	10.091	10.112	10.111	10.104	10.100	10.102
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.554	9.559	9.570	9.582	9.594	9.605	9.610	
	BETABAR	22.811	21.502	21.266	21.462	20.529	18.095	13.568	
	EPSILON	-0.000	-0.853	-2.488	-4.080	-5.686	-7.257	-8.118	
	K-BAR	0.960	0.960	0.960	0.960	0.959	0.959	0.960	
	V-BAR	94.468	94.047	93.261	94.040	92.794	91.227	90.430	
	VZ-BAR	87.079	87.501	86.910	87.520	86.901	86.710	87.906	
	V-THET-BAR	36.624	34.472	33.825	34.408	32.581	28.334	21.214	
	MACH-BAR	0.280	0.278	0.276	0.278	0.275	0.270	0.268	
	INCID-R	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-0.3	-2.3	-3.9	-5.0	-7.4	-11.1	-16.4	
	OMEGABAR	0.120	0.117	0.112	0.053	0.059	0.078	0.091	
	TURNING	-22.8	-21.5	-21.3	-21.5	-20.5	-18.1	-13.6	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.088	10.089	10.091	10.113	10.111	10.104	10.100	10.102
WCOR= 1.081	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3042.2	P-STATIC	9.276	9.282	9.290	9.301	9.313	9.323	9.322	
	BETABAR	18.211	17.279	17.254	17.629	16.943	14.956	11.223	
	EPSILON	-1.170	-1.731	-4.110	-6.401	-8.221	-9.075	-6.637	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	117.099	116.692	116.269	116.951	115.900	114.718	114.536	
	VZ-BAR	111.234	111.425	111.037	111.458	110.869	110.828	112.346	
	V-THET-BAR	36.595	34.661	34.487	35.418	33.775	29.606	22.292	
	MACH-BAR	0.348	0.347	0.346	0.348	0.345	0.341	0.340	
	U-WHEEL	194.031	199.806	211.359	222.911	234.463	246.015	251.791	
	V-BAR-PR	192.767	199.223	208.838	218.122	229.278	243.139	255.522	
	BETABAR-PR	54.757	55.990	57.879	59.269	61.080	62.881	63.917	
	V-THET-R-P	-157.436	-165.146	-176.872	-187.493	-200.688	-216.410	-229.499	
	MACH-BAR-P	0.573	0.592	0.621	0.649	0.682	0.723	0.759	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.968	13.470	13.721	13.508	13.214	13.019	12.816	13.419
ROTOR	T-TOTAL	314.66	314.40	314.89	314.36	313.82	317.27	320.16	314.78
-----	P-STATIC	10.463	10.566	10.765	10.928	11.056	11.173	11.237	
PR = 1.3284	BETABAR	65.036	55.027	52.962	54.025	55.410	63.408	81.219	
TR = 1.0923	EPSILON	-2.885	-2.071	-3.792	-5.704	-7.148	-7.415	-6.418	
EFF-A = 0.9180	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9186	V-BAR	193.893	205.745	205.845	192.633	176.936	165.046	153.974	
	VZ-BAR	81.832	117.933	123.991	113.158	100.441	73.883	23.505	
	V-THET-BAR	175.779	168.532	164.312	155.893	145.632	147.579	152.170	
	MACH-BAR	0.562	0.599	0.599	0.559	0.511	0.472	0.437	
	U-WHEEL	191.751	197.376	208.627	219.878	231.129	242.380	248.005	
	V-BAR-PR	83.376	121.415	131.686	130.001	131.922	120.199	98.676	
	BETABAR-PR	11.045	13.720	19.668	29.486	40.409	52.073	76.220	
	V-THET-R-P	-15.973	-28.844	-44.315	-63.985	-85.497	-94.801	-95.835	
	MACH-BAR-P	0.242	0.354	0.383	0.377	0.381	0.384	0.280	
	D-FACTOR	0.818	0.630	0.606	0.628	0.635	0.728	0.839	
	TURNING	43.7	42.3	38.2	29.8	20.7	10.8	-12.3	
	INCID-R	-2.6	-0.1	2.6	3.7	4.2	4.2	4.1	
	DEVIATION	22.9	17.5	11.1	11.8	15.2	20.9	42.4	
	OMEGABAR-R	0.274	0.074	0.015	0.058	0.106	0.256	0.380	
	LOSS PAR	0.094	0.026	0.005	0.020	0.034	0.069	0.041	
	RT-RATIO	1.285	1.335	1.359	1.336	1.307	1.289	1.269	1.3284
	EFF-AD	0.810	0.947	0.988	0.949	0.894	0.745	0.635	0.9180
	EFF-POLY	0.816	0.948	0.988	0.950	0.897	0.753	0.646	0.9186
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.968	13.460	13.723	13.520	13.221	13.028	12.816	13.419
	T-TOTAL	314.66	314.40	314.90	314.40	313.74	317.11	320.16	314.78
	P-STATIC	10.464	10.550	10.726	10.892	11.021	11.131	11.197	
	BETABAR	65.236	55.092	52.610	53.719	54.900	62.364	79.197	
	EPSILON	-0.113	-1.501	-3.103	-4.466	-5.354	-6.452	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	193.854	206.059	207.390	194.478	178.705	167.339	156.033	
	VZ-BAR	81.201	117.924	125.935	115.084	102.758	77.630	29.245	
	V-THET-BAR	176.027	168.908	164.775	156.772	146.202	148.198	153.268	
	MACH-BAR	0.562	0.600	0.604	0.564	0.516	0.479	0.443	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.521	13.171	13.361	13.141	12.904	12.771	12.497	13.066
ROTOR PLUS STATOR	T-TOTAL	314.66	314.40	314.88	314.53	313.67	316.03	320.16	314.78
----------	P-STATIC	11.920	11.922	11.915	11.902	11.886	11.871	11.864	
PR = 1.2935	BETABAR	16.597	14.967	13.794	13.621	12.923	10.938	8.340	
TR = 1.0923	EPSILON	0.450	-0.176	-0.860	-1.485	-2.079	-3.245	-5.489	
EFF-A = 0.8262	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8324	V-BAR	93.880	132.956	142.699	132.806	120.925	114.520	97.374	
	VZ-BAR	89.969	128.452	138.583	129.071	117.862	112.434	96.384	
	V-THET-BAR	26.815	34.307	34.024	31.277	27.045	21.745	14.124	
IGV,ROTOR,STATOR	MACH-BAR	0.266	0.379	0.408	0.379	0.345	0.325	0.273	
----------	EFF-POLY	0.787	0.848	0.797	0.747	0.762	0.888	0.695	
PR = 1.2897	INCID-R	9.6	2.4	1.8	3.2	3.4	8.7	24.4	
TR = 1.0923	DEVIATION	15.8	13.7	12.9	13.3	13.6	12.9	11.3	
EFF-A = 0.8190	OMEGA-BAR	0.179	0.099	0.121	0.184	0.144	0.135	0.197	
EFF-P = 0.8230	LOSS PAR	0.061	0.035	0.045	0.056	0.058	0.057	0.086	
	D-FACTOR	0.789	0.592	0.554	0.583	0.610	0.648	0.775	
	TURNING	48.6	40.1	38.8	40.1	42.0	51.4	70.9	

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Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 74)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.116	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2529.9	P-STATIC	9.731	9.731	9.733	9.737	9.743	9.751	9.756	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.561	-4.163	-5.716	-7.226	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	81.455	81.421	81.209	80.801	80.176	79.330	78.800	
	VZ-BAR	81.455	81.421	81.209	80.801	80.176	79.330	78.800	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.241	0.241	0.240	0.239	0.237	0.234	0.233	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1418	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.083	10.084	10.087	10.111	10.109	10.102	10.098	10.099
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.499	9.504	9.515	9.528	9.540	9.552	9.558	
	BETABAR	20.442	21.236	21.637	21.804	20.950	16.658	7.077	
	EPSILON	-0.000	-0.904	-2.519	-4.096	-5.656	-7.219	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	98.904	98.572	97.884	98.703	97.455	95.845	94.982	
	VZ-BAR	92.676	91.878	90.987	91.641	91.013	91.803	94.258	
	V-THET-BAR	34.543	35.704	36.092	36.661	34.845	27.471	11.702	
	MACH-BAR	0.293	0.292	0.290	0.292	0.289	0.284	0.281	
	INCID-R	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.6	-2.5	-3.5	-4.7	-6.9	-12.6	-22.8	
	OMEGABAR	0.121	0.118	0.111	0.053	0.059	0.077	0.090	
	TURNING	-20.4	-21.2	-21.6	-21.8	-20.9	-16.7	-7.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1334	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.083	10.084	10.088	10.111	10.108	10.102	10.098	10.099
WCOR= 1.119	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2529.9	P-STATIC	9.192	9.199	9.210	9.219	9.227	9.232	9.231	
	BETABAR	16.316	17.074	17.563	17.902	17.239	13.644	5.830	
	EPSILON	-1.170	-1.771	-3.120	-4.274	-5.462	-6.404	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	122.661	122.439	121.916	122.776	122.085	121.311	121.065	
	VZ-BAR	117.913	117.042	116.233	116.832	116.600	117.873	120.439	
	V-THET-BAR	34.516	35.948	36.788	37.739	36.181	28.613	12.296	
	MACH-BAR	0.366	0.364	0.363	0.365	0.363	0.361	0.360	
	U-WHEEL	161.357	166.160	175.767	185.374	194.981	204.588	209.391	
	V-BAR-FR	173.183	175.085	181.179	188.272	197.012	211.808	230.980	
	BETABAR-FR	47.089	48.048	50.092	51.642	53.711	56.181	58.572	
	V-THET-R-P	-126.842	-130.212	-138.979	-147.635	-158.800	-175.975	-197.095	
	MACH-BAR-P	0.516	0.521	0.539	0.560	0.586	0.630	0.687	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.793	11.949	12.040	11.999	12.019	11.840	11.702	11.963
ROTOR	T-TOTAL	303.44	303.46	304.22	303.61	303.33	304.38	305.20	303.82
-----	P-STATIC	9.805	9.857	9.964	10.069	10.165	10.248	10.288	
PR = 1.1845	BETABAR	47.786	46.069	46.580	45.472	43.402	43.985	39.865	
TR = 1.0543	EPSILON	-2.885	-2.726	-3.324	-4.382	-5.481	-6.211	-6.418	
EFF-A = 0.9149	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.9145	V-BAR	176.979	180.628	179.365	172.671	168.730	157.195	148.820	
	VZ-BAR	118.914	125.319	123.286	121.084	122.590	113.103	114.228	
	V-THET-BAR	131.077	130.081	130.278	123.098	115.937	109.170	95.391	
	MACH-BAR	0.520	0.532	0.527	0.507	0.495	0.459	0.433	
	U-WHEEL	159.462	164.139	173.496	182.852	192.208	201.564	206.242	
	V-BAR-FR	122.254	129.868	130.653	135.039	144.388	146.054	159.173	
	BETABAR-PR	13.425	15.201	19.318	26.259	31.887	39.242	44.141	
	V-THET-R-P	-28.385	-34.058	-43.217	-59.754	-76.271	-92.395	-110.851	
	MACH-BAR-P	0.359	0.382	0.384	0.396	0.423	0.426	0.463	
	D-FACTOR	0.487	0.450	0.473	0.462	0.436	0.479	0.471	
	TURNING	33.7	32.8	30.8	25.4	21.8	16.9	14.4	
	INCID-R	-10.3	-8.1	-5.2	-3.9	-3.2	-2.5	-1.2	
	DEVIATION	25.3	18.9	10.7	8.6	6.7	8.0	10.3	
	OMEGABAR-P	0.142	0.067	0.070	0.058	0.030	0.135	0.191	
	LOSS PAR	0.048	0.023	0.025	0.021	0.011	0.046	0.061	
	PT-RATIO	1.170	1.185	1.193	1.187	1.189	1.172	1.159	1.1845
	EFF-AD	0.865	0.936	0.931	0.937	0.965	0.826	0.729	0.9149
	EFF-POLY	0.867	0.936	0.932	0.937	0.965	0.829	0.733	0.9145
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.793	11.947	12.040	11.999	12.019	11.842	11.702	11.963
	T-TOTAL	303.44	303.88	304.22	303.62	303.32	304.37	305.20	303.82
	P-STATIC	9.813	9.841	9.912	9.999	10.091	10.180	10.223	
	BETABAR	48.022	45.961	45.956	44.681	42.564	43.157	39.098	
	EPSILON	-0.113	-1.008	-2.439	-4.183	-5.676	-7.359	-7.979	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	176.570	181.266	181.751	175.941	172.335	160.800	152.352	
	VZ-BAR	118.098	126.010	126.356	125.097	126.930	117.296	118.236	
	V-THET-BAR	131.262	130.300	130.643	123.714	116.568	109.990	96.080	
	MACH-BAR	0.519	0.534	0.534	0.517	0.506	0.470	0.443	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.416	11.680	11.935	11.906	11.903	11.457	10.942	11.770
ROTOR PLUS STATOR	T-TOTAL	303.44	303.47	304.22	303.60	303.34	304.46	305.20	303.82
----------	P-STATIC	10.563	10.567	10.565	10.550	10.527	10.490	10.471	
PR = 1.1655	BETABAR	13.959	13.382	12.579	12.726	12.415	8.606	3.980	
TR = 1.0543	EPSILON	0.450	-0.076	-1.406	-2.836	-4.032	-5.257	-5.489	
EFF-A = 0.8231	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8269	V-BAR	115.626	131.080	144.616	143.922	144.966	123.245	87.482	
	VZ-BAR	112.211	127.522	141.145	140.387	141.575	121.845	87.271	
	V-THET-BAR	27.893	30.329	31.495	31.703	31.167	18.485	6.072	
IGV,ROTOR,STATOR	MACH-BAR	0.335	0.381	0.421	0.419	0.422	0.357	0.251	
----------	EFF-POLY	0.693	0.758	0.877	0.876	0.808	0.468	0.263	
PR = 1.1618	INCID-R	-7.6	-6.7	-4.9	-5.8	-8.9	-10.5	-15.7	
TR = 1.0543	DEVIATION	13.2	12.1	11.7	12.4	13.0	10.6	6.9	
EFF-A = 0.8088	OMEGA-BAR	0.191	0.127	0.050	0.046	0.061	0.231	0.514	
EFF-P = 0.8097	LOSS PAR	0.066	0.045	0.018	0.018	0.025	0.099	0.226	
	D-FACTOR	0.553	0.477	0.413	0.392	0.367	0.478	0.690	
	TURNING	34.1	32.6	33.4	32.0	30.1	34.6	35.1	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 75)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
NCOR= 1.082	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2528.0	P-STATIC	9.755	9.755	9.757	9.761	9.767	9.775	9.779	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.592	-4.193	-5.782	-7.295	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	78.915	78.879	78.671	78.270	77.651	76.821	76.314	
	VZ-BAR	78.915	78.879	78.671	78.270	77.651	76.821	76.314	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.233	0.233	0.232	0.231	0.229	0.227	0.225	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1418	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.087	10.088	10.091	10.112	10.110	10.104	10.100	10.102
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.536	9.541	9.552	9.563	9.575	9.586	9.591	
	BETABAR	21.111	21.245	21.430	21.608	20.966	18.688	13.690	
	EPSILON	-0.000	-0.910	-2.584	-4.124	-5.729	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	95.987	95.624	94.900	95.684	94.518	92.977	92.125	
	VZ-BAR	89.545	89.125	88.339	88.960	88.260	88.070	89.508	
	V-THET-BAR	34.572	34.649	34.673	35.235	33.820	29.791	21.804	
	MACH-BAR	0.284	0.283	0.281	0.283	0.280	0.275	0.273	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.0	-2.5	-3.7	-4.9	-6.9	-10.6	-16.2	
	OMEGABAR	0.118	0.115	0.109	0.052	0.058	0.076	0.089	
	TURNING	-21.1	-21.2	-21.4	-21.6	-21.0	-18.7	-13.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.087	10.088	10.091	10.112	10.110	10.104	10.100	10.102
NCOR= 1.086	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2528.0	P-STATIC	9.250	9.257	9.267	9.275	9.283	9.289	9.289	
	BETABAR	16.880	17.104	17.430	17.777	17.297	15.397	11.297	
	EPSILON	-1.170	-1.783	-3.282	-4.426	-5.595	-6.544	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	118.971	118.547	117.990	118.802	118.106	117.268	116.952	
	VZ-BAR	113.845	113.304	112.572	113.130	112.765	113.056	114.686	
	V-THET-BAR	34.544	34.866	35.344	36.272	35.116	31.134	22.911	
	MACH-BAR	0.354	0.353	0.351	0.353	0.351	0.349	0.348	
	U-WHEEL	161.237	166.036	175.636	185.236	194.836	204.435	209.235	
	V-BAR-PR	170.328	173.332	179.875	187.054	195.517	206.920	218.791	
	BETABAR-PR	48.057	49.179	51.255	52.784	54.776	56.879	58.387	
	V-THET-R-P	-126.693	-131.171	-140.293	-148.964	-159.719	-173.301	-186.324	
	MACH-BAR-P	0.507	0.516	0.535	0.556	0.581	0.615	0.650	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.803	12.126	12.137	12.095	12.130	11.950	11.803	12.078
ROTOR	T-TOTAL	303.99	304.12	304.71	304.22	304.19	305.01	305.80	304.47
-----	P-STATIC	10.007	10.078	10.179	10.278	10.369	10.436	10.472	
PR = 1.1957	BETABAR	53.392	48.581	49.511	48.635	46.879	49.031	49.431	
TR = 1.0566	EPSILON	-2.885	-2.568	-3.477	-4.568	-5.675	-6.367	-6.418	
EFF-A = 0.9280	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
EFF-P = 0.9277	V-BAR	167.723	177.351	173.235	166.701	163.650	152.516	143.699	
	VZ-BAR	100.019	117.331	112.483	110.162	111.862	99.999	93.456	
	V-THET-BAR	134.637	132.981	131.747	125.112	119.449	115.158	109.158	
	MACH-BAR	0.491	0.521	0.508	0.488	0.479	0.444	0.417	
	U-WHEEL	159.343	164.017	173.366	182.716	192.065	201.414	206.089	
	V-BAR-PR	103.026	121.369	119.952	124.325	133.371	132.062	138.647	
	BETABAR-PR	13.875	14.810	20.309	27.598	32.988	40.780	46.046	
	V-THET-R-P	-24.706	-31.036	-41.619	-57.604	-72.616	-86.256	-96.931	
	MACH-BAR-P	0.302	0.356	0.351	0.364	0.390	0.385	0.391	
	D-FACTOR	0.599	0.502	0.535	0.524	0.498	0.540	0.559	
	TURNING	34.2	34.4	30.9	25.2	21.8	16.1	12.3	
	INCID-M	-9.3	-7.0	-4.0	-2.8	-2.1	-1.8	-1.4	
	DEVIATION	25.7	18.6	11.7	9.9	7.8	9.6	12.2	
	OMEGABAR-P	0.182	0.027	0.059	0.055	0.034	0.133	0.203	
	LOSS PAR	0.062	0.010	0.021	0.020	0.012	0.044	0.063	
	PT-RATIO	1.170	1.202	1.203	1.196	1.200	1.183	1.169	1.1957
	EFF-AD	0.837	0.976	0.944	0.943	0.962	0.841	0.745	0.9280
	EFF-POLY	0.840	0.975	0.945	0.943	0.962	0.844	0.750	0.9277
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.803	12.121	12.140	12.095	12.130	11.953	11.803	12.078
	T-TOTAL	303.99	304.12	304.71	304.24	304.19	305.00	305.80	304.47
	P-STATIC	10.019	10.066	10.139	10.222	10.306	10.384	10.424	
	BETABAR	53.778	48.553	48.945	47.920	46.069	48.276	48.685	
	EPSILON	-0.113	-0.960	-2.062	-3.383	-4.792	-6.665	-7.979	
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	167.128	177.738	175.203	169.379	166.747	155.369	146.381	
	VZ-BAR	98.759	117.652	115.071	113.510	115.687	103.407	96.640	
	V-THET-BAR	134.827	133.203	132.115	125.714	120.087	115.959	109.946	
	MACH-BAR	0.489	0.522	0.514	0.496	0.488	0.453	0.425	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.480	11.750	12.014	12.013	12.020	11.624	11.195	11.879
ROTOR PLUS STATOR	T-TOTAL	303.99	304.11	304.70	304.24	304.19	305.00	305.80	304.47
----------	P-STATIC	10.726	10.731	10.732	10.721	10.704	10.675	10.658	
PR = 1.1760	BETABAR	14.354	13.414	12.664	13.230	13.227	9.885	4.944	
TR = 1.0566	EPSILON	0.450	-0.039	-1.149	-2.591	-3.865	-5.110	-5.489	
EFF-A = 0.8378	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8415	V-BAR	108.307	124.962	139.389	139.827	141.139	121.335	92.565	
	VZ-BAR	104.926	121.556	135.998	136.116	137.395	119.527	92.221	
	V-THET-BAR	26.851	28.977	30.559	32.001	32.295	20.846	7.977	
IGV,ROTOR,STATOR	MACH-BAR	0.313	0.362	0.405	0.406	0.410	0.351	0.266	
----------	EFF-POLY	0.709	0.672	0.844	0.873	0.803	0.493	0.295	
PR = 1.1725	INCID-M	-1.9	-4.1	-1.9	-2.6	-5.4	-5.4	-6.1	
TR = 1.0566	DEVIATION	13.6	12.1	11.8	12.9	13.9	11.9	7.9	
EFF-A = 0.8244	OMEGA-BAR	0.181	0.181	0.063	0.044	0.060	0.210	0.441	
EFF-P = 0.8261	LOSS PAR	0.062	0.064	0.023	0.017	0.024	0.089	0.194	
	D-FACTOR	0.581	0.509	0.427	0.397	0.375	0.486	0.679	
	TURNING	39.4	35.1	36.3	34.7	32.8	38.4	43.7	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 76)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.049	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2549.6	P-STATIC	9.779	9.779	9.781	9.784	9.790	9.797	9.802	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.925	-2.588	-4.180	-5.751	-7.246	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	76.386	76.352	76.148	75.741	75.116	74.282	73.763	
	VZ-BAR	76.386	76.352	76.148	75.741	75.116	74.282	73.763	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.226	0.225	0.225	0.224	0.222	0.219	0.218	
IGV TRAILING EDGE	DIAMTER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.091	10.092	10.093	10.114	10.112	10.106	10.102	10.104
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.576	9.580	9.590	9.601	9.612	9.623	9.627	
	BETABAR	20.612	21.085	21.436	21.665	20.917	17.981	12.466	
	EPSILON	-0.000	-0.892	-2.517	-4.094	-5.682	-7.240	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	92.747	92.375	91.607	92.387	91.234	89.719	88.946	
	VZ-BAR	86.810	86.190	85.270	85.861	85.221	85.330	86.849	
	V-THET-BAR	32.650	33.232	33.479	34.107	32.573	27.696	19.200	
	MACH-BAR	0.275	0.273	0.271	0.273	0.270	0.265	0.263	
	INCID-R	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.5	-2.7	-3.7	-4.8	-7.0	-11.3	-17.5	
	OMEGABAR	0.115	0.113	0.109	0.052	0.057	0.076	0.089	
	TURNING	-20.6	-21.1	-21.4	-21.7	-20.9	-18.0	-12.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.091	10.092	10.093	10.114	10.112	10.106	10.102	10.104
WCOR= 1.052	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2549.6	P-STATIC	9.311	9.318	9.326	9.333	9.339	9.345	9.345	
	BETABAR	16.530	17.024	17.451	17.831	17.252	14.820	10.299	
	EPSILON	-1.170	-1.575	-2.967	-4.422	-5.867	-7.005	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	114.664	114.230	113.753	114.632	114.004	113.132	112.851	
	VZ-BAR	109.925	109.225	108.517	109.126	108.875	109.363	111.033	
	V-THET-BAR	32.624	33.443	34.113	35.102	33.811	28.937	20.175	
	MACH-BAR	0.341	0.339	0.338	0.341	0.339	0.336	0.335	
	U-WHEEL	162.613	167.453	177.135	186.817	196.498	206.180	211.021	
	V-BAR-PR	170.237	172.885	179.532	186.885	195.758	208.269	220.794	
	BETABAR-PR	49.781	50.817	52.810	54.272	56.207	58.322	59.809	
	V-THET-B-P	-129.989	-134.010	-143.022	-151.714	-162.687	-177.243	-190.845	
	MACH-BAR-P	0.506	0.514	0.533	0.555	0.582	0.619	0.656	
ROTOR TRAILING EDGE	DIAMETER	0.1251	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.823	11.979	12.172	12.158	12.210	11.996	11.873	12.105
ROTOR	T-TOTAL	304.48	304.68	304.95	304.73	304.82	305.43	306.38	304.93
-----	P-STATIC	10.089	10.146	10.267	10.380	10.480	10.565	10.606	
PR = 1.1981	BETABAR	55.038	52.721	50.175	49.978	48.245	50.139	50.893	
TR = 1.0582	EPSILON	-2.885	-2.287	-2.997	-4.353	-5.736	-6.682	-6.418	
EFF-A = 0.9126	K-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
EFF-P = 0.9132	V-BAR	164.604	168.425	170.526	168.450	161.702	147.880	139.747	
	VZ-BAR	94.323	102.016	109.211	105.754	107.688	94.784	88.148	
	V-THET-BAR	134.898	134.005	130.965	125.936	120.629	113.509	108.439	
	MACH-BAR	0.481	0.493	0.499	0.481	0.472	0.430	0.405	
	U-WHEEL	160.703	165.417	174.846	184.275	193.704	203.133	207.847	
	V-BAR-ER	97.789	106.746	117.707	120.788	130.139	130.472	132.861	
	BETABAR-PR	15.300	17.104	21.886	28.878	34.160	43.395	48.436	
	V-THET-B-P	-25.804	-31.411	-43.881	-58.339	-73.074	-89.624	-99.408	
	MACH-BAR-P	0.286	0.312	0.344	0.353	0.380	0.379	0.385	
	D-FACTOR	0.634	0.590	0.547	0.546	0.521	0.556	0.576	
	TURNING	34.5	33.7	30.9	25.4	22.0	14.9	11.4	
	INCID-R	-7.6	-5.3	-2.5	-1.3	-0.7	-0.3	0.0	
	DEVIATION	27.2	20.8	13.3	11.2	9.0	12.2	14.6	
	OMEGABAR-P	0.209	0.141	0.060	0.059	0.038	0.134	0.203	
	LOSS PAR	0.070	0.048	0.021	0.021	0.013	0.043	0.060	
	PT-RATIO	1.172	1.187	1.206	1.202	1.208	1.187	1.175	1.1981
	EFF-AD	0.819	0.877	0.945	0.941	0.959	0.840	0.749	0.9126
	EFF-POLY	0.822	0.879	0.945	0.941	0.959	0.843	0.753	0.9132
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.823	11.975	12.171	12.157	12.210	11.999	11.873	12.105
	T-TOTAL	304.48	304.68	304.95	304.73	304.82	305.41	306.38	304.93
	P-STATIC	10.097	10.137	10.230	10.327	10.423	10.510	10.552	
	BETABAR	55.344	52.725	49.695	49.245	47.492	49.235	49.879	
	EPSILON	-0.113	-0.977	-2.544	-4.087	-5.578	-7.186	-7.979	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	164.225	168.696	172.236	166.991	164.539	150.939	142.832	
	VZ-BAR	93.386	102.173	111.410	109.014	111.178	98.560	92.041	
	V-THET-BAR	135.089	134.222	131.350	126.497	121.295	114.316	109.222	
	MACH-BAR	0.480	0.494	0.504	0.488	0.481	0.439	0.414	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.549	11.796	12.061	12.044	12.063	11.687	11.398	11.933
ROTOR PLUS STATOR	T-TOTAL	304.48	304.67	304.95	304.73	304.82	305.41	306.38	304.93
----------	P-STATIC	10.866	10.867	10.863	10.851	10.832	10.807	10.797	
PR = 1.1810	BETABAR	14.545	13.796	13.137	13.528	13.256	10.872	7.000	
TR = 1.0582	EPSILON	0.450	-0.113	-1.350	-2.588	-3.739	-4.841	-5.489	
EFF-A = 0.8370	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8408	V-BAR	102.770	118.990	134.284	134.050	135.202	116.429	97.227	
	VZ-BAR	99.476	115.560	130.769	130.331	132.573	114.328	96.502	
	V-THET-BAR	25.810	28.363	30.521	31.357	31.232	21.991	11.848	
IGV,ROTOR,STATOR	MACH-BAR	0.296	0.344	0.389	0.389	0.395	0.336	0.279	
----------	EFF-POLY	0.757	0.821	0.867	0.839	0.759	0.513	0.359	
PR = 1.1778	INCID-R	-0.3	0.1	-1.1	-1.3	-4.0	-4.4	-4.9	
TR = 1.0582	DEVIATION	13.8	12.5	12.2	13.2	13.9	12.9	9.9	
EFF-A = 0.8248	OMEGA-BAR	0.159	0.098	0.057	0.062	0.082	0.209	0.360	
EFF-P = 0.8269	LOSS PAR	0.054	0.034	0.021	0.024	0.033	0.089	0.158	
	D-FACTOR	0.610	0.523	0.445	0.427	0.403	0.498	0.625	
	TURNING	40.8	38.9	36.6	35.7	34.2	38.4	42.9	

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Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 77)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.001	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2529.1	P-STATIC	9.811	9.812	9.813	9.816	9.821	9.828	9.832	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	PPSILON	-0.000	-0.930	-2.567	-4.172	-5.726	-7.258	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	72.699	72.666	72.482	72.115	71.550	70.793	70.319	
	VZ-BAR	72.699	72.666	72.482	72.115	71.550	70.793	70.319	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.215	0.214	0.214	0.213	0.211	0.209	0.207	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.095	10.096	10.097	10.115	10.114	10.108	10.105	10.106
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.630	9.634	9.642	9.652	9.662	9.671	9.676	
	BETABAR	20.280	20.972	21.427	21.747	20.772	17.396	11.245	
	EPSILON	-0.000	-0.970	-2.525	-4.098	-5.691	-7.247	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	88.059	87.705	86.986	87.725	86.686	85.220	84.444	
	VZ-BAR	82.600	81.894	80.974	81.482	81.051	81.314	82.823	
	V-THET-BAR	30.521	31.391	31.778	32.503	30.744	25.478	16.466	
	MACH-BAR	0.260	0.259	0.257	0.259	0.256	0.252	0.250	
	INCID-R	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.8	-2.8	-3.7	-4.8	-7.1	-11.8	-18.7	
	OMEGABAR	0.113	0.112	0.109	0.052	0.056	0.076	0.089	
	TURNING	-20.3	-21.0	-21.4	-21.7	-20.8	-17.4	-11.2	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1374	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.095	10.096	10.097	10.115	10.114	10.108	10.105	10.106
WCOR= 1.004	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2529.1	P-STATIC	9.392	9.398	9.405	9.412	9.418	9.422	9.422	
	BETABAR	16.288	16.961	17.485	17.938	17.177	14.350	9.304	
	EPSILON	-1.170	-1.637	-3.120	-4.548	-5.678	-6.495	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	108.735	108.313	107.824	108.632	108.045	107.285	107.020	
	VZ-BAR	104.370	103.602	102.842	103.352	103.226	103.932	105.612	
	V-THET-BAR	30.497	31.596	32.397	33.457	31.908	26.589	17.302	
	MACH-BAR	0.323	0.321	0.320	0.322	0.321	0.318	0.318	
	U-WHEEL	161.304	166.105	175.709	185.313	194.917	204.520	209.322	
	V-BAR-PR	167.343	169.784	176.395	183.691	192.945	206.063	219.147	
	BETABAR-PR	51.414	52.395	54.335	55.760	57.655	59.708	61.189	
	V-THET-B-P	-130.807	-134.509	-143.312	-151.856	-163.008	-177.931	-192.019	
	MACH-BAR-P	0.497	0.504	0.524	0.545	0.573	0.611	0.650	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.853	12.080	12.286	12.182	12.185	12.089	11.975	12.161
ROTOR	T-TOTAL	305.17	305.05	305.49	305.05	305.35	306.33	307.24	305.49
-----	P-STATIC	10.176	10.247	10.378	10.483	10.581	10.665	10.705	
PR = 1.2032	BETABAR	58.513	53.723	51.599	52.201	51.662	52.678	52.359	
TR = 1.0601	EPSILON	-2.885	-2.262	-3.144	-4.418	-5.575	-6.409	-6.418	
EFF-A = 0.9054	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9058	V-BAR	161.735	167.756	169.948	160.446	155.699	147.145	139.507	
	VZ-BAR	84.475	99.264	105.566	98.337	96.581	89.213	85.199	
	V-THET-BAR	137.921	135.214	133.185	126.778	122.124	117.016	110.468	
	MACH-BAR	0.472	0.490	0.497	0.468	0.453	0.427	0.403	
	U-WHEEL	159.409	164.085	173.438	182.791	192.349	201.898	206.174	
	V-BAR-PR	87.165	103.381	112.992	113.188	119.299	122.870	128.135	
	BETABAR-PR	18.272	16.204	20.871	29.663	35.980	43.439	48.328	
	V-THET-B-P	-21.488	-28.871	-40.253	-56.013	-70.020	-84.482	-95.706	
	MACH-BAR-P	0.254	0.302	0.330	0.330	0.347	0.356	0.370	
	D-FACTOR	0.702	0.609	0.574	0.585	0.577	0.596	0.604	
	TURNING	37.1	36.2	33.5	26.1	21.7	16.3	12.9	
	INCID-R	-6.0	-3.7	-0.9	0.2	0.8	1.1	1.4	
	DEVIATION	26.1	19.9	12.3	12.0	10.7	12.2	14.5	
	OMEGABAR-P	0.251	0.122	0.047	0.071	0.080	0.151	0.213	
	LOSS PAR	0.085	0.042	0.017	0.025	0.027	0.048	0.063	
	PT-RATIO	1.174	1.197	1.217	1.204	1.205	1.196	1.185	1.2032
	EFF-AD	0.797	0.899	0.960	0.932	0.918	0.833	0.752	0.9054
	EFF-POLY	0.800	0.900	0.960	0.933	0.919	0.837	0.757	0.9058
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.853	12.074	12.286	12.184	12.185	12.090	11.975	12.161
	T-TOTAL	305.17	305.05	305.49	305.06	305.34	306.32	307.24	305.49
	P-STATIC	10.183	10.238	10.383	10.438	10.530	10.615	10.655	
	BETABAR	58.869	53.755	51.112	51.492	50.855	51.835	51.432	
	PPSILON	-0.113	-1.083	-2.320	-4.036	-5.136	-6.580	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	161.354	167.984	171.590	162.764	158.297	149.867	142.308	
	VZ-BAR	83.420	99.325	107.723	101.340	99.931	92.607	88.721	
	V-THET-BAR	138.716	135.485	133.562	127.367	122.766	117.830	111.266	
	MACH-BAR	0.471	0.491	0.502	0.475	0.461	0.435	0.412	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.640	11.857	12.099	12.069	12.038	11.791	11.608	11.969
ROTOR PLUS STATOR	T-TOTAL	305.17	305.05	305.49	305.06	305.34	306.34	307.24	305.49
----------	P-STATIC	11.009	11.012	11.012	11.002	10.986	10.963	10.949	
PR = 1.1843	BETABAR	14.410	14.125	13.581	13.799	13.363	12.086	9.028	
TR = 1.0601	EPSILON	0.450	-0.187	-1.290	-2.508	-3.780	-4.972	-5.489	
EFF-A = 0.8238	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8280	V-BAR	98.403	113.136	127.639	126.510	125.817	112.622	101.084	
	VZ-BAR	95.308	109.717	124.070	122.859	122.410	110.125	99.831	
	V-THET-BAR	24.488	27.605	29.971	30.175	29.079	23.581	15.861	
IGV,ROTOR,STATOR	MACH-BAR	0.283	0.327	0.369	0.366	0.368	0.324	0.290	
----------	EFF-POLY	0.810	0.799	0.803	0.846	0.776	0.559	0.466	
PR = 1.1813	INCID-R	3.2	1.1	0.3	1.0	-0.7	-1.8	-3.3	
TR = 1.0601	DEVIATION	13.6	12.8	12.7	13.4	14.0	14.1	12.0	
EFF-A = 0.8140	OMEGA-BAR	0.128	0.118	0.096	0.066	0.088	0.203	0.278	
EFF-P = 0.8159	LOSS PAR	0.044	0.042	0.036	0.025	0.036	0.086	0.121	
	D-FACTOR	0.640	0.560	0.488	0.463	0.454	0.524	0.590	
	TURNING	44.5	39.6	37.5	37.7	37.5	39.7	42.4	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 78)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.967	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 2540.2	P-STATIC	9.827	9.828	9.829	9.832	9.837	9.844	9.848	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.925	-2.580	-4.165	-5.747	-7.234	-8.067	
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	70.842	70.815	70.621	70.250	69.674	68.904	68.422	
	VZ-BAR	70.842	70.815	70.621	70.250	69.674	68.904	68.422	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.209	0.209	0.208	0.207	0.206	0.203	0.202	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.098	10.098	10.099	10.116	10.116	10.110	10.107	10.108
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.665	9.669	9.678	9.687	9.696	9.705	9.709	
	BETABAR	20.285	20.873	21.228	21.530	20.782	17.667	10.647	
	EPSILON	-0.000	-0.892	-2.506	-4.081	-5.676	-7.227	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	84.847	84.452	83.732	84.444	83.419	81.980	81.277	
	VZ-BAR	79.585	78.910	78.050	78.553	77.992	78.105	79.878	
	V-THET-BAR	29.415	30.090	30.317	30.990	29.598	24.880	15.016	
	MACH-BAR	0.251	0.250	0.247	0.250	0.247	0.242	0.240	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.8	-2.9	-3.9	-5.0	-7.1	-11.6	-19.3	
	OMEGABAR	0.110	0.110	0.106	0.051	0.054	0.075	0.087	
	TURNING	-20.3	-20.9	-21.2	-21.5	-20.8	-17.7	-10.6	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.098	10.098	10.100	10.116	10.115	10.110	10.107	10.108
WCOR= 0.969	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 2540.2	P-STATIC	9.446	9.451	9.457	9.464	9.471	9.477	9.477	
	BETABAR	16.320	16.899	17.321	17.766	17.210	14.617	8.837	
	EPSILON	-1.170	-1.572	-3.422	-5.318	-6.956	-7.370	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	104.599	104.180	103.774	104.541	103.857	102.949	102.717	
	VZ-BAR	100.385	99.682	99.069	99.556	99.207	99.609	101.497	
	V-THET-BAR	29.392	30.283	30.895	31.899	30.729	25.979	15.779	
	MACH-BAR	0.310	0.309	0.308	0.310	0.308	0.305	0.305	
	U-WHEEL	162.012	166.834	176.480	186.126	195.772	205.418	210.241	
	V-BAR-PR	166.328	169.065	176.096	183.569	192.566	205.234	219.356	
	BETABAR-PR	52.877	53.870	55.764	57.156	58.989	60.962	62.438	
	V-THET-B-P	-132.620	-136.551	-145.585	-154.227	-165.043	-179.438	-194.462	
	MACH-BAR-P	0.493	0.501	0.522	0.544	0.571	0.609	0.650	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.884	12.130	12.327	12.278	12.217	12.000	12.015	12.199
ROTOR	T-TOTAL	305.57	305.35	305.77	305.32	305.83	307.02	307.88	305.84
-----	P-STATIC	10.244	10.305	10.433	10.543	10.636	10.723	10.765	
PR = 1.2069	BETABAR	60.416	54.060	51.861	51.468	52.936	57.787	53.787	
TR = 1.0613	EPSILON	-2.885	-2.080	-3.124	-4.811	-6.368	-6.729	-6.418	
EFF-A = 0.9030	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9027	V-BAR	159.684	167.105	169.123	161.629	158.424	139.696	138.302	
	VZ-BAR	78.836	98.085	104.447	100.686	93.080	74.461	81.707	
	V-THET-BAR	138.867	135.261	133.017	126.436	123.205	118.194	111.586	
	MACH-BAR	0.465	0.488	0.494	0.472	0.449	0.404	0.399	
	U-WHEEL	160.109	164.805	174.199	183.594	192.988	202.382	207.079	
	V-BAR-PR	81.647	102.441	112.277	115.785	116.359	112.404	125.678	
	BETABAR-PR	15.080	16.748	21.518	29.581	36.872	48.493	49.449	
	V-THET-B-P	-21.242	-29.584	-41.182	-57.157	-69.783	-84.188	-95.493	
	MACH-BAR-P	0.238	0.299	0.328	0.338	0.338	0.325	0.363	
	D-FACTOR	0.738	0.615	0.581	0.576	0.599	0.655	0.621	
	TURNING	37.8	37.1	34.2	27.6	22.1	12.5	13.0	
	INCID-M	-4.5	-2.3	0.5	1.6	2.1	2.3	2.7	
	DEVIATION	26.9	20.5	12.9	11.9	11.7	17.3	15.6	
	OMEGABAR-P	0.269	0.121	0.048	0.046	0.092	0.214	0.228	
	LOSS PAR	0.091	0.042	0.017	0.016	0.031	0.062	0.066	
	PT-RATIO	1.177	1.201	1.220	1.213	1.208	1.187	1.189	1.2069
	EFF-AD	0.789	0.903	0.960	0.956	0.906	0.768	0.742	0.9030
	EFF-POLY	0.793	0.904	0.960	0.956	0.907	0.773	0.747	0.9027
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.884	12.125	12.326	12.278	12.223	12.001	12.015	12.199
	T-TOTAL	305.57	305.35	305.77	305.31	305.80	307.00	307.88	305.84
	P-STATIC	10.249	10.298	10.403	10.506	10.593	10.676	10.716	
	BETABAR	60.734	54.162	51.474	50.973	52.080	56.730	52.822	
	EPSILON	-0.113	-1.237	-2.688	-4.068	-5.342	-7.104	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	159.410	167.202	170.461	163.439	156.883	142.393	141.061	
	VZ-BAR	77.929	97.902	106.175	102.916	96.422	78.108	85.243	
	V-THET-BAR	139.063	135.506	133.356	126.967	123.742	119.055	112.391	
	MACH-BAR	0.465	0.489	0.498	0.477	0.457	0.412	0.408	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.696	11.928	12.152	12.092	12.044	11.837	11.702	12.010
ROTOR PLUS STATOR	T-TOTAL	305.57	305.35	305.75	305.35	305.69	306.91	307.88	305.84
----------	P-STATIC	11.104	11.105	11.101	11.093	11.080	11.064	11.055	
PR = 1.1882	BETABAR	14.616	14.263	13.826	13.929	13.516	11.998	8.843	
TR = 1.0613	EPSILON	0.450	-0.177	-1.021	-1.895	-2.785	-4.475	-5.489	
EFF-A = 0.8234	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8277	V-BAR	95.045	111.333	125.182	122.200	120.292	108.568	99.909	
	VZ-BAR	91.970	107.902	121.555	118.607	116.960	106.194	98.721	
	V-THET-BAR	23.984	27.424	29.914	29.815	28.115	22.574	15.358	
IGV,ROTOR,STATOR	MACH-BAR	0.273	0.321	0.362	0.353	0.347	0.312	0.286	
----------	EFF-POLY	0.833	0.820	0.821	0.774	0.767	0.736	0.540	
PR = 1.1854	INCID-M	5.1	1.5	0.6	0.5	0.6	3.1	-2.0	
TR = 1.0613	DEVIATION	13.8	13.0	12.9	13.6	14.1	14.0	11.8	
EFF-A = 0.8151	OMEGA-BAR	0.115	0.108	0.090	0.105	0.110	0.123	0.241	
EFF-P = 0.8167	LOSS PAR	0.040	0.038	0.033	0.041	0.048	0.052	0.105	
	D-FACTOR	0.660	0.569	0.498	0.495	0.493	0.538	0.600	
	TURNING	46.1	39.9	37.6	37.0	38.6	44.7	44.0	

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Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 79)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
NCOR= 0.937	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2533.9	P-STATIC	9.847	9.848	9.849	9.852	9.856	9.862	9.865	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.584	-4.176	-5.757	-7.258	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	68.447	68.420	68.250	67.907	67.376	66.669	66.227	
	VZ-BAR	68.447	68.420	68.250	67.907	67.376	66.669	66.227	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.202	0.202	0.201	0.200	0.199	0.197	0.195	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.100	10.100	10.101	10.117	10.117	10.111	10.108	10.110
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.707	9.710	9.717	9.726	9.734	9.742	9.746	
	BETABAR	20.375	20.737	20.975	21.391	20.841	17.964	10.108	
	EPSILON	-0.000	-0.879	-2.511	-4.107	-5.683	-7.247	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	80.838	80.460	79.827	80.565	79.641	78.229	77.476	
	VZ-BAR	75.780	75.247	74.537	75.015	74.430	74.405	76.274	
	V-THET-BAR	28.744	28.489	28.575	29.384	28.334	24.126	13.597	
	MACH-BAR	0.239	0.238	0.236	0.238	0.235	0.231	0.229	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.7	-3.0	-4.2	-5.1	-7.0	-11.3	-19.8	
	OMEGABAR	0.110	0.111	0.107	0.051	0.054	0.075	0.088	
	TURNING	-20.4	-20.7	-21.0	-21.4	-20.8	-18.0	-10.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.100	10.100	10.102	10.117	10.117	10.111	10.108	10.110
NCOR= 0.939	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2533.9	P-STATIC	9.508	9.513	9.518	9.524	9.530	9.535	9.535	
	BETABAR	16.411	16.811	17.147	17.688	17.299	14.880	8.396	
	EPSILON	-1.170	-1.494	-3.260	-5.109	-6.425	-6.992	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	99.536	99.130	98.789	99.562	98.958	98.113	97.850	
	VZ-BAR	95.481	94.894	94.398	94.855	94.482	94.815	96.801	
	V-THET-BAR	28.122	28.670	29.125	30.250	29.426	25.194	14.287	
	MACH-BAR	0.295	0.294	0.293	0.295	0.293	0.291	0.290	
	U-WHEEL	161.611	166.422	176.044	185.666	195.288	204.910	209.721	
	V-BAR-PR	164.122	167.275	174.632	182.077	190.686	203.195	218.093	
	BETABAR-PR	54.425	55.437	57.276	58.602	60.331	62.182	63.650	
	V-THET-B-P	-133.489	-137.752	-146.919	-155.416	-165.861	-179.716	-195.433	
	MACH-BAR-P	0.486	0.496	0.517	0.540	0.566	0.602	0.646	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.914	12.193	12.377	12.322	12.257	12.149	12.035	12.261
ROTOR	T-TOTAL	305.77	305.69	305.77	305.45	305.80	307.22	308.48	305.99
-----	P-STATIC	10.344	10.411	10.543	10.652	10.745	10.832	10.873	
PR = 1.2128	BETABAR	63.165	55.714	52.381	52.649	54.147	57.505	58.279	
TR = 1.0618	EPSILON	-2.885	-1.933	-3.139	-4.698	-6.068	-6.603	-6.418	
EFF-A = 0.9193	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9184	V-BAR	155.920	164.625	165.887	158.171	150.606	141.087	133.127	
	VZ-BAR	70.387	92.744	101.258	95.962	88.213	75.799	69.995	
	V-THET-BAR	139.128	135.969	131.397	125.735	122.063	118.995	113.241	
	MACH-BAR	0.454	0.480	0.484	0.461	0.438	0.408	0.384	
	U-WHEEL	159.712	164.398	173.768	183.140	192.510	201.882	206.567	
	V-BAR-PR	73.335	97.006	109.775	111.823	112.901	112.338	116.658	
	BETABAR-PR	16.301	17.022	22.704	30.887	38.614	47.551	53.130	
	V-THET-B-P	-20.584	-28.428	-42.371	-57.404	-70.447	-82.887	-93.326	
	MACH-BAR-P	0.213	0.283	0.320	0.326	0.328	0.325	0.336	
	D-FACTOR	0.788	0.649	0.592	0.595	0.612	0.654	0.667	
	TURNING	38.1	38.4	34.6	27.7	21.7	14.6	10.5	
	INCID-M	-3.0	-0.7	2.0	3.1	3.4	3.5	3.9	
	DEVIATION	28.2	20.8	14.1	13.2	13.4	16.3	19.3	
	OMEGABAR-P	0.276	0.117	0.026	0.037	0.078	0.176	0.251	
	LOSS PAR	0.093	0.040	0.009	0.013	0.026	0.052	0.067	
	PT-RATIO	1.180	1.207	1.225	1.218	1.212	1.202	1.191	1.2128
	EFF-AD	0.792	0.910	0.979	0.966	0.923	0.816	0.726	0.9193
	EFF-POLY	0.796	0.911	0.978	0.966	0.924	0.820	0.732	0.9184

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 79)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.914	12.187	12.376	12.325	12.259	12.151	12.035	12.261
	T-TOTAL	305.77	305.69	305.78	305.46	305.78	307.19	308.48	305.99
	P-STATIC	10.346	10.403	10.515	10.616	10.702	10.785	10.826	
	BETABAR	63.422	55.797	52.035	52.102	53.299	56.470	57.060	
	EPSILON	-0.113	-1.476	-2.632	-4.086	-5.051	-6.764	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	155.788	164.783	167.161	160.053	152.908	143.773	135.907	
	VZ-BAR	69.702	92.636	102.834	98.313	91.384	79.418	73.902	
	V-THET-BAR	139.325	136.227	131.788	126.299	122.594	119.848	118.058	
	MACH-BAR	0.453	0.481	0.488	0.467	0.445	0.416	0.392	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.697	11.950	12.179	12.085	12.016	11.873	11.755	12.018
	T-TOTAL	305.77	305.69	305.78	305.47	305.72	307.11	308.48	305.99
	P-STATIC	11.170	11.173	11.172	11.162	11.149	11.132	11.121	
	BETABAR	14.744	14.444	14.021	14.076	13.661	11.841	8.548	
	EPSILON	0.450	-0.298	-1.276	-2.128	-3.217	-4.664	-5.489	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	89.713	108.008	122.292	117.356	114.044	106.152	98.669	
	VZ-BAR	86.759	104.595	118.648	113.832	110.817	103.892	97.573	
	V-THET-BAR	22.831	26.935	29.629	28.583	26.935	21.782	14.666	
	MACH-BAR	0.258	0.311	0.353	0.339	0.329	0.305	0.282	
	EFF-POLY	0.805	0.783	0.788	0.715	0.677	0.586	0.532	
	INCID-M	7.8	3.1	1.2	1.6	1.8	2.8	2.3	
	DEVIATION	14.0	13.1	13.1	13.7	14.3	13.8	11.5	
	OMEGA-BAR	0.138	0.133	0.106	0.141	0.156	0.204	0.232	
	LOSS PAR	0.047	0.047	0.039	0.054	0.063	0.086	0.101	
	D-FACTOR	0.689	0.587	0.503	0.514	0.518	0.563	0.602	
	TURNING	48.7	41.4	38.0	38.0	39.6	44.6	48.5	

ROTOR PLUS STATOR	
PR	= 1.1887
TR	= 1.0618
EFF-A	= 0.8187
EFF-P	= 0.8231

IGV,ROTOR,STATOR	
PR	= 1.1862
TR	= 1.0618
EFF-A	= 0.8115
EFF-P	= 0.8129

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Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 80)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.929	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 2534.4	P-STATIC	9.857	9.858	9.859	9.862	9.866	9.871	9.875	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.584	-4.766	-5.742	-7.258	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	67.208	67.180	67.014	66.680	66.165	65.468	65.033	
	VZ-BAR	67.208	67.180	67.014	66.680	66.165	65.468	65.033	
	V-THET-BAR	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.198	0.198	0.198	0.197	0.195	0.193	0.192	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.101	10.100	10.102	10.117	10.117	10.112	10.108	10.110
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.715	9.718	9.725	9.733	9.741	9.749	9.753	
	BETABAR	19.576	20.760	20.961	21.387	20.643	17.377	10.603	
	EPSILON	-0.000	-0.879	-2.528	-4.093	-5.695	-7.247	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	79.999	79.643	79.032	79.778	78.878	77.497	76.765	
	VZ-BAR	75.375	74.472	73.803	74.284	73.814	73.951	75.454	
	V-THET-BAR	26.804	28.229	28.272	29.092	27.808	23.144	14.125	
	MACH-BAR	0.236	0.235	0.233	0.236	0.233	0.229	0.227	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-3.5	-3.0	-4.2	-5.1	-7.2	-11.9	-19.3	
	OMEGABAR	0.112	0.113	0.109	0.052	0.055	0.076	0.090	
	TURNING	-19.6	-20.8	-21.0	-21.4	-20.6	-17.4	-10.6	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.101	10.100	10.102	10.118	10.117	10.112	10.108	10.110
WCOR= 0.931	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 2534.4	P-STATIC	9.520	9.524	9.530	9.535	9.541	9.546	9.546	
	BETABAR	15.763	16.828	17.133	17.683	17.130	14.402	8.809	
	EPSILON	-1.170	-1.437	-3.115	-4.887	-6.319	-7.005	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	98.591	98.171	97.811	98.596	98.012	97.186	96.924	
	VZ-BAR	94.884	93.966	93.470	93.938	93.663	94.126	95.787	
	V-THET-BAR	26.782	28.420	28.814	29.949	28.869	24.171	14.843	
	MACH-BAR	0.292	0.291	0.290	0.292	0.290	0.288	0.287	
	U-WHEEL	161.645	166.456	176.080	185.704	195.328	204.952	209.764	
	W-BAR-PR	164.896	166.985	174.426	181.891	191.002	203.818	217.183	
	BETABAR-PR	54.871	55.755	57.595	58.904	60.633	62.894	63.831	
	V-THET-B-P	-134.862	-138.036	-147.266	-155.755	-166.459	-180.781	-194.921	
	MACH-BAR-P	0.489	0.495	0.517	0.539	0.566	0.604	0.643	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.914	12.201	12.424	12.370	12.271	12.156	12.035	12.287
ROTOR	T-TOTAL	305.83	305.86	306.04	305.37	305.49	307.16	308.63	305.98
PR = 1.2153	P-STATIC	10.351	10.417	10.550	10.663	10.753	10.836	10.877	
TR = 1.0618	BETABAR	62.613	56.055	52.264	51.464	52.583	56.567	59.472	
EFF-A = 0.9299	EPSILON	-2.885	-2.246	-3.079	-4.680	-5.980	-6.632	-6.418	
EFF-P = 0.9286	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	155.566	164.731	167.546	159.629	150.736	141.155	132.921	
	VZ-BAR	71.561	91.997	102.542	99.449	91.674	77.777	67.518	
	V-THET-BAR	138.130	136.609	132.502	124.866	119.651	117.787	114.496	
	MACH-BAR	0.453	0.481	0.489	0.465	0.438	0.408	0.383	
	U-WHEEL	159.746	164.432	173.804	183.177	192.550	201.923	206.610	
	W-BAR-PR	74.754	96.113	110.559	115.291	117.134	114.602	114.209	
	BETABAR-PR	16.807	16.813	21.933	30.384	38.493	47.250	53.759	
	V-THET-B-P	-21.615	-27.822	-41.303	-58.312	-72.899	-84.136	-92.114	
	MACH-BAR-P	0.218	0.280	0.323	0.336	0.341	0.332	0.329	
	D-FACTOR	0.781	0.656	0.590	0.574	0.587	0.643	0.678	
	TURNING	38.1	38.9	35.7	28.5	22.1	15.2	10.1	
	INCID-M	-2.5	-0.4	2.3	3.4	3.7	3.9	4.1	
	DEVIATION	28.7	20.6	13.3	12.7	13.3	16.0	19.9	
	OMEGABAR-P	0.279	0.125	0.021	0.010	0.055	0.171	0.259	
	LOSS PAR	0.093	0.043	0.008	0.004	0.018	0.051	0.069	
	PT-RATIO	1.180	1.208	1.230	1.223	1.213	1.202	1.191	1.2153
	EFF-AD	0.789	0.905	0.983	0.991	0.985	0.821	0.721	0.9299
	EFF-POLY	0.793	0.906	0.982	0.990	0.985	0.824	0.727	0.9286
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.914	12.197	12.423	12.373	12.273	12.158	12.035	12.287
	T-TOTAL	305.83	305.86	306.04	305.38	305.46	307.13	308.63	305.98
	P-STATIC	10.355	10.408	10.520	10.624	10.709	10.790	10.830	
	BETABAR	62.927	56.090	51.913	50.900	51.707	55.536	58.179	
	EPSILON	-0.113	-1.319	-2.803	-4.185	-4.757	-6.720	-7.979	
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	155.347	164.964	168.904	161.706	153.106	143.835	135.721	
	VZ-BAR	70.703	92.045	104.188	101.983	94.878	81.399	71.562	
	V-THET-BAR	138.325	136.850	132.940	125.492	120.165	118.583	115.322	
	MACH-BAR	0.452	0.481	0.493	0.472	0.446	0.416	0.391	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.697	11.966	12.195	12.104	12.027	11.887	11.765	12.033
ROTOR PLUS STATOR	T-TOTAL	305.83	305.86	306.04	305.41	305.42	307.02	308.63	305.98
PR = 1.1902	P-STATIC	11.182	11.186	11.184	11.173	11.160	11.142	11.132	
TR = 1.0618	BETABAR	14.287	14.132	13.974	14.116	13.497	11.539	8.392	
EFF-A = 0.8248	EPSILON	0.450	-0.321	-1.435	-2.352	-3.302	-4.655	-5.489	
EFF-P = 0.8291	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	88.612	108.203	122.538	117.724	113.951	106.264	98.552	
	VZ-BAR	85.872	104.929	118.912	114.169	110.804	104.115	97.497	
	V-THET-BAR	21.868	26.415	29.590	28.712	26.597	21.257	14.384	
IGV,ROTOR,STATOR	MACH-BAR	0.254	0.312	0.358	0.340	0.329	0.305	0.282	
	EFF-POLY	0.806	0.789	0.767	0.693	0.674	0.600	0.546	
PR = 1.1876	INCID-M	7.3	3.4	1.1	0.4	0.2	1.9	3.4	
TR = 1.0618	DEVIATION	13.5	12.8	13.1	13.8	14.1	13.5	11.3	
EFF-A = 0.8177	OMEGA-BAR	0.139	0.129	0.120	0.154	0.157	0.198	0.225	
EFF-P = 0.8190	LOSS PAR	0.048	0.046	0.044	0.059	0.063	0.084	0.098	
	D-FACTOR	0.695	0.589	0.509	0.514	0.514	0.560	0.607	
	TURNING	48.6	42.0	37.9	36.8	38.2	44.0	49.8	

Table B-5. Scaled Stage with IGV-10 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 81)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.917	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2536.6	P-STATIC	9.859	9.860	9.861	9.863	9.868	9.874	9.877	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.856	-2.467	-4.107	-5.755	-7.304	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	66.986	66.956	66.797	66.465	65.924	65.188	64.744	
	VZ-BAR	66.986	66.956	66.797	66.465	65.924	65.188	64.744	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.198	0.197	0.197	0.196	0.194	0.192	0.191	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.101	10.101	10.102	10.118	10.117	10.112	10.109	10.111
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.724	9.727	9.734	9.742	9.750	9.758	9.761	
	BETABAR	19.210	20.463	20.945	21.462	20.912	17.317	8.494	
	EPSILON	-0.000	-0.832	-2.412	-4.019	-5.702	-7.303	-8.118	
	K-BAR	0.960	0.960	0.960	0.960	0.959	0.959	0.960	
	V-BAR	79.180	78.865	78.175	78.595	77.963	76.586	75.933	
	VZ-BAR	74.768	73.832	73.039	73.424	72.827	73.103	75.100	
	V-THET-BAR	26.060	27.550	27.945	28.866	27.828	22.795	11.216	
	MACH-BAR	0.234	0.233	0.231	0.235	0.230	0.226	0.224	
	INCID-M	12.5	13.1	14.7	16.3	17.7	19.6	19.6	
	DEVIATION	-3.9	-3.3	-4.2	-5.0	-7.0	-11.9	-21.4	
	OMEGABAR	0.110	0.112	0.107	0.051	0.054	0.075	0.088	
	TURNING	-19.2	-20.5	-20.9	-21.5	-20.9	-17.3	-8.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.101	10.101	10.103	10.118	10.117	10.112	10.109	10.111
WCOR= 0.919	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2536.6	P-STATIC	9.533	9.537	9.543	9.546	9.554	9.560	9.559	
	BETABAR	15.493	16.613	17.126	17.742	17.350	14.350	7.068	
	EPSILON	-1.170	-1.301	-3.075	-5.099	-6.745	-7.510	-6.657	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	97.484	97.052	96.740	97.531	96.905	96.009	95.778	
	VZ-BAR	93.942	93.000	92.450	92.892	92.496	93.004	95.050	
	V-THET-BAR	26.039	27.748	28.491	29.720	28.898	23.794	11.785	
	MACH-BAR	0.269	0.287	0.287	0.289	0.287	0.284	0.284	
	U-WHEEL	161.785	166.601	176.233	185.865	195.497	205.130	209.946	
	V-BAR-PR	165.082	167.122	174.284	181.688	190.555	203.746	219.777	
	BETABAR-PR	55.315	56.186	57.963	59.250	60.960	62.845	64.375	
	V-THET-B-P	-135.746	-138.853	-147.742	-156.145	-166.600	-181.336	-198.161	
	MACH-BAR-P	0.469	0.495	0.516	0.538	0.564	0.604	0.651	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.925	12.213	12.471	12.298	12.287	12.147	12.035	12.312
ROTOR	T-TOTAL	305.89	305.88	305.95	305.57	305.68	307.54	308.92	306.08
PR = 1.2178	P-STATIC	10.391	10.454	10.588	10.702	10.794	10.878	10.918	
TR = 1.0622	BETABAR	63.366	56.318	51.756	52.284	53.955	58.357	59.762	
EFF-A = 0.9349	EPSILON	-2.885	-2.066	-3.028	-4.940	-6.247	-6.819	-6.416	
EFF-P = 0.9332	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
	V-BAR	153.973	163.370	167.563	158.964	149.393	138.475	130.539	
	VZ-BAR	69.040	90.614	103.723	97.246	87.910	72.657	65.857	
	V-THET-BAR	137.626	135.888	131.601	125.749	120.777	117.880	112.706	
	MACH-BAR	0.448	0.476	0.489	0.463	0.434	0.400	0.376	
	U-WHEEL	159.884	164.574	173.955	183.336	192.717	202.098	206.789	
	V-BAR-PR	72.534	95.047	112.048	113.019	113.612	111.267	114.840	
	BETABAR-PR	17.869	17.553	22.208	30.633	39.303	49.204	55.036	
	V-THET-B-P	-22.258	-28.686	-42.355	-57.588	-71.940	-84.218	-94.080	
	MACH-BAR-P	0.211	0.277	0.327	0.329	0.330	0.321	0.330	
	D-FACTOR	0.795	0.662	0.586	0.589	0.607	0.666	0.682	
	TURNING	37.4	38.6	35.6	26.6	21.7	13.6	9.4	
	INCID-M	-2.1	0.1	2.7	3.7	4.1	4.2	4.6	
	DEVIATION	29.7	21.3	13.6	13.0	14.1	16.0	21.2	
	OMEGABAR-P	0.277	0.122	-0.006	0.011	0.059	0.189	0.266	
	LOSS PAR	0.092	0.042	-0.002	0.004	0.019	0.054	0.068	
	PT-RATIO	1.180	1.209	1.234	1.225	1.215	1.201	1.191	1.2178
	EFF-AD	0.790	0.908	1.006	0.990	0.941	0.802	0.710	0.9349
	EFF-POLY	0.794	0.909	1.004	0.990	0.941	0.805	0.717	0.9332
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.925	12.208	12.469	12.402	12.290	12.151	12.035	12.312
	T-TOTAL	305.89	305.88	305.96	305.58	305.65	307.49	308.92	306.08
	P-STATIC	10.395	10.449	10.560	10.666	10.755	10.834	10.874	
	BETABAR	63.717	56.436	51.433	51.760	53.152	57.311	58.462	
	EPSILON	-0.113	-1.398	-2.948	-3.794	-5.229	-6.627	-7.479	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	153.712	163.449	168.840	160.856	151.560	141.092	133.196	
	VZ-BAR	68.065	90.380	105.260	99.563	90.894	76.207	69.671	
	V-THET-BAR	137.821	136.131	132.012	126.340	121.271	118.739	113.522	
	MACH-BAR	0.447	0.477	0.493	0.469	0.441	0.408	0.383	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.697	11.976	12.207	12.114	12.029	11.886	11.775	12.041
ROTOR PLUS STATOR	T-TOTAL	305.89	305.88	305.96	305.60	305.56	307.25	308.92	306.08
	P-STATIC	11.237	11.238	11.233	11.223	11.211	11.197	11.189	
PR = 1.1909	BETABAR	14.629	14.272	13.906	13.754	13.051	11.298	7.844	
TR = 1.0622	EPSILON	0.450	-0.499	-1.483	-2.208	-2.944	-4.207	-5.489	
EFF-A = 0.8232	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8275	V-BAR	83.735	105.118	120.123	115.120	110.604	102.206	94.618	
	VZ-BAR	81.020	101.675	116.603	111.819	107.747	100.227	93.802	
	V-THET-BAR	21.147	25.908	28.866	27.371	24.977	20.024	12.922	
IGV,ROTOR,STATOR	MACH-BAR	0.240	0.303	0.347	0.332	0.319	0.293	0.271	
	EFF-POLY	0.861	0.790	0.743	0.681	0.669	0.630	0.564	
PR = 1.1884	INCID-M	8.1	3.8	0.6	1.3	1.6	3.7	3.7	
TR = 1.0622	DEVIATION	13.8	13.0	13.0	13.4	13.7	13.3	10.8	
EFF-A = 0.8165	OMEGA-BAR	0.149	0.132	0.137	0.166	0.170	0.201	0.226	
EFF-P = 0.8177	LOSS PAR	0.051	0.046	0.051	0.064	0.069	0.085	0.099	
	D-FACTOR	0.724	0.604	0.523	0.533	0.539	0.588	0.628	
	TURNING	49.1	42.2	37.5	36.0	40.1	46.0	50.6	

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Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units

(Data Point No. 82)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.381	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3582.5	P-STATIC	9.528	9.528	9.532	9.538	9.548	9.561	9.569	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.068	-2.695	-4.214	-5.824	-7.259	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	100.389	100.333	100.022	99.471	98.624	97.515	96.829	
	VZ-BAR	100.389	100.333	100.022	99.471	98.624	97.515	96.829	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.298	0.297	0.296	0.295	0.292	0.289	0.287	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.003	9.971	9.911	10.018	10.024	10.014	10.006	9.990
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	8.842	8.858	8.892	8.932	8.970	9.006	9.023	
	BETABAR	28.655	30.472	31.557	31.229	30.817	29.610	24.390	
	EPSILON	-0.000	-1.051	-2.651	-4.155	-5.776	-7.284	-8.118	
	K-BAR	0.975	0.975	0.975	0.975	0.974	0.974	0.975	
	V-BAR	141.625	138.739	132.897	136.629	134.456	131.525	129.814	
	VZ-BAR	124.280	119.576	113.244	116.831	115.473	114.342	118.229	
	V-THET-BAR	67.913	70.352	69.551	70.837	68.881	64.986	53.606	
	MACH-BAR	0.423	0.415	0.397	0.408	0.401	0.392	0.387	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.4	-3.3	-3.6	-5.3	-7.1	-9.6	-15.5	
	OMEGABAR	0.213	0.266	0.368	0.191	0.185	0.205	0.222	
	TURNING	-28.7	-30.5	-31.6	-31.2	-30.8	-29.6	-24.4	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.003	9.971	9.911	10.019	10.023	10.014	10.006	9.990
WCOR= 1.401	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3582.5	P-STATIC	8.328	8.347	8.380	8.408	8.435	8.459	8.466	
	BETABAR	23.256	24.720	25.490	25.695	25.389	24.301	20.040	
	EPSILON	-1.170	-1.726	-3.123	-4.472	-5.635	-6.412	-6.637	
	K-BAR	0.975	0.975	0.975	0.975	0.975	0.975	0.975	
	V-BAR	171.863	169.276	164.634	168.176	166.857	165.101	164.334	
	VZ-BAR	157.899	153.764	148.609	151.546	150.742	150.468	154.378	
	V-THET-BAR	67.859	70.785	70.850	72.918	71.541	67.943	56.329	
	MACH-BAR	0.518	0.510	0.495	0.507	0.502	0.497	0.494	
	U-WHEEL	228.488	235.289	248.893	262.496	276.100	289.704	296.505	
	V-BAR-PR	225.241	225.182	231.916	242.707	254.104	267.992	285.512	
	BETABAR-PR	45.491	46.932	50.148	51.361	53.612	55.840	57.268	
	V-THET-B-P	-160.629	-164.504	-178.043	-189.578	-204.559	-221.761	-240.176	
	MACH-BAR-P	0.679	0.679	0.698	0.731	0.765	0.807	0.859	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.312	13.455	13.670	13.754	13.824	13.694	13.576	13.680
ROTOR	T-TOTAL	316.41	316.23	317.27	316.78	318.57	319.89	320.79	317.82
	P-STATIC	9.101	9.199	9.425	9.646	9.856	10.063	10.165	
PR = 1.3694	BETABAR	49.398	48.964	48.870	48.377	49.658	50.776	48.512	
TR = 1.1029	EPSILON	-2.885	-2.539	-2.906	-4.206	-5.360	-6.207	-6.418	
EFF-A = 0.9152	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.9171	V-BAR	255.837	255.742	253.463	247.695	242.816	232.711	226.106	
	VZ-BAR	166.499	167.901	166.720	164.526	157.189	147.155	149.787	
	V-THET-BAR	194.244	192.906	190.913	185.159	185.068	180.277	169.374	
	MACH-BAR	0.757	0.757	0.748	0.730	0.712	0.678	0.656	
	U-WHEEL	225.803	232.427	245.676	258.925	272.174	285.422	292.047	
	V-BAR-PR	169.463	172.497	175.498	180.316	179.717	180.866	193.609	
	BETABAR-PR	10.733	13.244	18.182	24.148	28.994	35.544	39.317	
	V-THET-B-P	-31.560	-39.521	-54.763	-73.765	-87.106	-105.145	-122.672	
	MACH-BAR-P	0.502	0.511	0.518	0.532	0.527	0.527	0.562	
	D-FACTOR	0.442	0.427	0.438	0.440	0.478	0.508	0.497	
	TURNING	34.8	33.7	32.0	27.2	24.6	20.3	18.0	
	INCID-M	-11.9	-9.2	-5.1	-4.2	-3.3	-2.8	-2.5	
	DEVIATION	22.6	17.0	9.6	6.5	3.8	4.3	5.5	
	OMEGABAR-P	0.151	0.094	0.054	0.048	0.089	0.144	0.175	
	LOSS PAR	0.052	0.033	0.019	0.018	0.033	0.051	0.061	
	PT-RATIO	1.331	1.349	1.379	1.372	1.379	1.368	1.357	1.3694
	EFF-AD	0.869	0.918	0.953	0.954	0.912	0.850	0.805	0.9152
	EFF-POLY	0.874	0.921	0.954	0.955	0.916	0.856	0.813	0.9171
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.312	13.452	13.666	13.752	13.824	13.696	13.576	13.680
	T-TOTAL	316.41	316.23	317.26	316.76	318.53	319.88	320.79	317.82
	P-STATIC	9.134	9.189	9.341	9.518	9.696	9.883	9.988	
	BETABAR	49.802	49.001	48.331	47.518	48.464	49.376	47.173	
	EPSILON	-0.113	-0.777	-2.159	-3.592	-5.310	-6.920	-7.979	
	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
	V-BAR	254.666	256.014	256.232	251.986	248.322	239.168	232.608	
	VZ-BAR	164.369	167.956	170.350	170.181	164.660	155.721	158.124	
	V-THET-BAR	194.518	193.218	191.404	185.837	185.876	181.528	170.597	
	MACH-BAR	0.754	0.758	0.758	0.744	0.730	0.699	0.677	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.421	12.803	13.351	13.515	13.444	13.089	12.826	13.249
ROTOR PLUS STATOR	T-TOTAL	316.41	316.21	317.25	316.73	318.47	319.88	320.79	317.82
	P-STATIC	11.315	11.319	11.319	11.302	11.269	11.223	11.194	
PR = 1.3262	BETABAR	8.609	8.900	9.299	10.120	10.199	8.095	5.027	
TR = 1.1029	EPSILON	0.450	0.157	-0.990	-2.265	-3.555	-4.915	-5.489	
EFF-A = 0.8165	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8237	V-BAR	129.278	148.131	171.384	178.048	177.366	166.212	156.780	
	VZ-BAR	127.822	146.347	169.131	175.278	174.563	164.553	156.177	
	V-THET-BAR	19.352	22.923	27.696	31.285	31.407	23.412	13.738	
IGV,ROTOR,STATOR	MACH-BAR	0.367	0.423	0.491	0.512	0.508	0.474	0.445	
	EFF-POLY	0.754	0.807	0.890	0.908	0.845	0.735	0.666	
PR = 1.3078	INCID-M	-5.9	-3.6	-2.5	-3.0	-3.0	-4.3	-7.6	
TR = 1.1029	DEVIATION	7.8	7.6	8.4	9.8	10.8	10.1	8.0	
EFF-A = 0.7760	OMEGA-BAR	0.213	0.152	0.073	0.056	0.092	0.159	0.209	
EFF-P = 0.7828	LOSS PAR	0.075	0.055	0.027	0.022	0.038	0.068	0.092	
	D-FACTOR	0.736	0.663	0.576	0.540	0.547	0.595	0.628	
	TURNING	41.2	40.1	39.0	37.4	38.3	41.3	42.1	

Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 83)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.344	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3579.7	P-STATIC	9.561	9.562	9.565	9.571	9.581	9.593	9.600	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.099	-2.730	-4.228	-5.831	-7.265	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	97.490	97.433	97.123	96.588	95.761	94.692	94.029	
	VZ-BAR	97.490	97.433	97.123	96.588	95.761	94.692	94.029	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.289	0.289	0.288	0.286	0.284	0.280	0.278	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.013	9.985	9.931	10.026	10.031	10.022	10.013	10.001
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	8.940	8.954	8.985	9.022	9.057	9.090	9.106	
	BETABAR	28.334	29.980	31.413	31.247	30.818	29.462	24.361	
	EPSILON	-0.000	-1.081	-2.678	-4.169	-5.770	-7.277	-8.118	
	K-BAR	0.980	0.980	0.980	0.980	0.979	0.979	0.980	
	V-BAR	135.863	133.163	127.753	131.117	129.022	126.164	124.476	
	VZ-BAR	119.586	115.346	109.029	112.097	110.804	109.842	113.394	
	V-THET-BAR	64.483	66.537	66.584	68.014	66.099	62.053	51.344	
	MACH-BAR	0.406	0.397	0.381	0.391	0.385	0.376	0.371	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.7	-3.8	-3.7	-5.3	-7.1	-9.8	-15.6	
	OMEGABAR	0.207	0.258	0.354	0.188	0.183	0.204	0.223	
	TURNING	-28.3	-30.0	-31.4	-31.2	-30.8	-29.5	-24.4	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.013	9.984	9.932	10.027	10.031	10.022	10.013	10.001
WCOR= 1.362	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3579.7	P-STATIC	8.471	8.488	8.518	8.543	8.568	8.589	8.595	
	BETABAR	23.077	24.410	25.480	25.788	25.464	24.249	20.073	
	EPSILON	-1.170	-1.744	-3.057	-4.424	-5.625	-6.468	-6.637	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	164.377	161.966	157.649	160.927	159.667	157.979	157.193	
	VZ-BAR	151.223	147.486	142.315	144.901	144.157	144.036	147.644	
	V-THET-BAR	64.431	66.931	67.820	70.010	68.648	64.882	53.952	
	MACH-BAR	0.495	0.487	0.473	0.484	0.480	0.474	0.472	
	U-WHEEL	228.314	235.110	248.704	262.297	275.890	289.483	296.280	
	V-BAR-PR	222.993	223.694	230.160	240.772	252.451	266.821	283.763	
	BETABAR-PR	47.301	48.750	51.804	52.998	55.177	57.326	58.647	
	V-THET-B-P	-163.883	-168.179	-180.884	-192.287	-207.242	-224.601	-242.328	
	MACH-BAR-P	0.671	0.673	0.691	0.724	0.759	0.801	0.852	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.626	13.707	13.881	14.022	14.114	14.033	13.789	13.952
ROTOR	T-TOTAL	317.85	317.73	318.59	318.27	319.69	321.63	322.23	319.24
	P-STATIC	9.482	9.588	9.823	10.056	10.276	10.492	10.596	
PR = 1.3950	BETABAR	51.917	51.811	51.991	51.373	52.151	53.873	52.563	
TR = 1.1078	EPSILON	-2.885	-2.214	-2.785	-4.025	-5.266	-6.169	-6.418	
EFF-A = 0.9271	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.9289	V-BAR	250.674	248.911	245.368	240.722	235.945	226.965	216.619	
	VZ-BAR	154.618	153.890	151.093	150.271	144.773	133.813	131.679	
	V-THET-BAR	197.309	195.639	193.330	188.057	186.306	183.323	172.001	
	MACH-BAR	0.739	0.733	0.720	0.706	0.689	0.658	0.625	
	U-WHEEL	225.634	232.251	245.489	258.728	271.967	285.205	291.825	
	W-BAR-PR	157.190	158.194	159.856	166.071	168.223	168.190	178.037	
	BETABAR-PR	10.380	13.382	19.043	25.184	30.613	37.284	42.301	
	V-THET-B-P	-28.323	-36.612	-52.159	-70.671	-85.660	-101.882	-119.824	
	MACH-BAR-P	0.463	0.466	0.469	0.487	0.491	0.488	0.514	
	D-FACTOR	0.501	0.497	0.510	0.504	0.527	0.563	0.556	
	TURNING	36.9	35.4	32.8	27.8	24.6	20.0	16.3	
	INCID-M	-10.1	-7.4	-3.5	-2.6	-1.7	-1.3	-1.1	
	DEVIATION	22.2	17.1	10.4	7.5	5.4	6.1	8.5	
	OMEGABAR-P	0.131	0.093	0.059	0.042	0.066	0.132	0.179	
	LOSS PAR	0.045	0.033	0.021	0.015	0.024	0.046	0.059	
	PT-RATIO	1.361	1.373	1.397	1.398	1.407	1.400	1.377	1.3950
	EFF-AD	0.894	0.924	0.951	0.962	0.937	0.870	0.810	0.9271
	EFF-POLY	0.898	0.927	0.953	0.963	0.940	0.876	0.818	0.9289
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.626	13.704	13.876	14.018	14.112	14.036	13.789	13.952
	T-TOTAL	317.85	317.73	318.58	318.25	319.64	321.61	322.23	319.24
	P-STATIC	9.526	9.592	9.757	9.948	10.132	10.328	10.428	
	BETABAR	52.470	51.974	51.541	50.594	50.966	52.439	51.023	
	EPSILON	-0.113	-0.547	-1.916	-3.394	-4.737	-6.900	-7.979	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	249.155	248.709	247.491	244.280	240.829	232.859	222.848	
	VZ-BAR	151.780	153.208	153.926	155.072	151.672	141.951	140.173	
	V-THET-BAR	197.588	195.917	193.800	188.747	187.066	184.589	173.242	
	MACH-BAR	0.734	0.732	0.727	0.717	0.704	0.677	0.644	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.482	13.000	13.575	13.769	13.745	13.504	13.130	13.534
ROTOR PLUS STATOR	T-TOTAL	317.85	317.71	318.56	318.22	319.53	321.59	322.23	319.24
	P-STATIC	11.664	11.670	11.675	11.663	11.635	11.592	11.563	
PR = 1.3532	BETABAR	8.865	9.233	9.833	10.473	10.418	7.967	5.355	
TR = 1.1078	EPSILON	0.450	0.329	-0.755	-2.051	-3.368	-4.813	-5.489	
EFF-A = 0.8372	K-BAR	0.885	0.885	0.885	0.885	0.885	0.885	0.885	
EFF-P = 0.8441	V-BAR	110.663	139.029	164.299	172.080	172.758	166.025	151.918	
	VZ-BAR	109.341	137.226	161.885	169.214	169.910	164.419	151.255	
	V-THET-BAR	17.054	22.319	28.058	31.279	31.240	23.019	14.178	
IGV,ROTOR,STATOR	MACH-BAR	0.313	0.395	0.469	0.493	0.494	0.472	0.430	
	EFF-POLY	0.697	0.787	0.891	0.898	0.844	0.749	0.677	
PR = 1.3358	INCID-M	-3.2	-0.7	0.7	0.1	-0.5	-1.2	-3.8	
TR = 1.1078	DEVIATION	8.1	7.9	8.9	10.1	11.0	9.9	8.3	
EFF-A = 0.8010	OMEGA-BAR	0.279	0.171	0.073	0.061	0.092	0.144	0.196	
EFF-P = 0.8080	LOSS PAR	0.098	0.061	0.027	0.024	0.038	0.062	0.086	
	D-FACTOR	0.813	0.694	0.592	0.554	0.554	0.592	0.638	
	TURNING	43.6	42.7	41.7	40.1	40.5	44.5	45.7	

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Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 84)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.310	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3587.6	P-STATIC	9.592	9.592	9.596	9.602	9.611	9.622	9.629	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.136	-2.795	-4.257	-5.865	-7.288	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	94.787	94.731	94.417	93.893	93.081	92.032	91.393	
	VZ-BAR	94.787	94.731	94.417	93.893	93.081	92.032	91.393	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.281	0.280	0.280	0.278	0.276	0.272	0.270	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.021	9.995	9.947	10.033	10.037	10.028	10.019	10.010
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.032	9.047	9.078	9.110	9.143	9.173	9.186	
	BETABAR	27.959	29.640	31.350	31.099	30.711	29.684	24.748	
	EPSILON	-0.000	-1.096	-2.703	-4.175	-5.805	-7.270	-8.118	
	K-BAR	0.990	0.990	0.990	0.990	0.989	0.989	0.990	
	V-BAR	130.136	127.445	122.195	125.474	123.428	120.641	119.045	
	VZ-BAR	114.947	110.769	104.355	107.441	106.118	104.804	108.111	
	V-THET-BAR	61.012	63.023	63.573	64.809	65.035	59.743	49.836	
	MACH-BAR	0.388	0.380	0.364	0.374	0.367	0.359	0.354	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-5.1	-4.1	-3.8	-5.4	-7.2	-9.6	-15.2	
	OMEGABAR	0.204	0.253	0.344	0.185	0.181	0.204	0.224	
	TURNING	-28.0	-29.6	-31.3	-31.1	-30.7	-29.7	-24.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.021	9.995	9.947	10.034	10.037	10.028	10.019	10.010
WCOR= 1.326	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3587.6	P-STATIC	8.609	8.625	8.651	8.674	8.699	8.720	8.726	
	BETABAR	22.880	24.219	25.479	25.738	25.453	24.535	20.479	
	EPSILON	-1.170	-1.763	-3.296	-4.927	-6.392	-6.999	-6.637	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	156.798	154.505	150.486	153.583	152.295	150.503	149.677	
	VZ-BAR	144.461	140.905	135.850	138.346	137.513	136.910	140.218	
	V-THET-BAR	60.964	63.380	64.736	66.694	65.451	62.496	52.367	
	MACH-BAR	0.471	0.464	0.451	0.461	0.457	0.451	0.448	
	U-WHEEL	228.815	235.626	249.249	262.872	276.495	290.119	296.930	
	V-BAR-PR	221.457	222.542	229.132	240.055	251.894	265.627	281.908	
	BETABAR-PR	49.283	50.715	53.636	54.807	56.911	58.972	60.173	
	V-THET-B-P	-167.851	-172.246	-184.513	-196.178	-211.044	-227.623	-244.563	
	MACH-BAR-P	0.665	0.668	0.687	0.720	0.755	0.796	0.845	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.647	13.820	14.071	14.177	14.186	13.974	13.839	14.048
ROTOR	T-TOTAL	318.97	318.70	319.04	319.11	320.53	322.71	323.56	320.13
	P-STATIC	9.680	9.790	10.037	10.270	10.485	10.694	10.794	
PR = 1.4033	BETABAR	54.203	53.091	53.130	52.327	53.849	57.300	55.860	
TR = 1.1109	EPSILON	-2.885	-2.018	-2.696	-4.116	-5.686	-6.448	-6.418	
EFF-A = 0.9186	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.9205	V-BAR	244.728	245.085	243.070	237.520	230.811	218.428	211.079	
	VZ-BAR	143.147	147.183	145.842	145.160	136.161	118.002	118.460	
	V-THET-BAR	198.497	195.969	194.426	188.001	186.359	183.810	174.704	
	MACH-BAR	0.718	0.719	0.712	0.694	0.671	0.630	0.606	
	U-WHEEL	226.127	232.760	246.028	259.296	272.563	285.831	292.465	
	V-BAR-PR	145.789	151.719	154.701	161.726	161.169	156.009	167.034	
	BETABAR-PR	10.925	14.032	19.473	26.157	32.345	40.838	44.830	
	V-THET-B-P	-27.630	-36.792	-51.572	-71.295	-86.205	-102.021	-117.761	
	MACH-BAR-P	0.428	0.445	0.453	0.473	0.469	0.450	0.480	
	D-FACTOR	0.557	0.530	0.538	0.528	0.560	0.615	0.599	
	TURNING	38.4	36.7	34.2	28.7	24.6	18.1	15.3	
	INCID-M	-8.1	-5.4	-1.6	-0.7	0.0	0.3	0.4	
	DEVIATION	22.8	17.8	10.9	8.5	7.2	9.6	11.0	
	OMEGABAR-P	0.176	0.107	0.058	0.040	0.080	0.176	0.209	
	LOSS PAR	0.061	0.037	0.021	0.014	0.028	0.059	0.066	
	PT-RATIO	1.362	1.383	1.414	1.412	1.414	1.394	1.381	1.4033
	EFF-AD	0.863	0.916	0.954	0.965	0.926	0.831	0.788	0.9186
	EFF-POLY	0.869	0.919	0.955	0.966	0.929	0.838	0.797	0.9205
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.647	13.814	14.064	14.174	14.191	13.979	13.839	14.048
	T-TOTAL	318.97	318.70	319.62	319.12	320.45	322.67	323.56	320.13
	P-STATIC	9.724	9.799	9.977	10.175	10.367	10.560	10.660	
	BETABAR	54.823	53.349	52.701	51.653	52.705	55.963	54.507	
	EPSILON	-0.113	-0.320	-1.838	-3.554	-5.109	-6.713	-7.979	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	243.188	244.599	244.955	240.662	235.034	223.423	216.123	
	VZ-BAR	140.101	146.011	148.436	149.313	142.411	125.055	125.480	
	V-THET-BAR	198.777	196.235	194.858	188.743	186.972	185.146	175.965	
	MACH-BAR	0.713	0.718	0.718	0.705	0.685	0.646	0.622	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.522	13.094	13.747	13.885	13.791	13.492	13.261	13.624
ROTOR PLUS STATOR	T-TOTAL	318.97	318.69	319.55	319.14	320.19	322.55	323.56	320.13
	P-STATIC	11.885	11.889	11.892	11.881	11.856	11.822	11.802	
PR = 1.3610	BETABAR	12.455	11.369	10.335	10.460	10.270	8.259	5.953	
TR = 1.1109	EPSILON	0.450	0.507	-0.334	-1.601	-2.779	-4.480	-5.489	
EFF-A = 0.8301	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.8373	V-BAR	97.427	131.728	161.400	167.125	164.898	154.933	145.947	
	VZ-BAR	95.134	129.148	158.782	164.348	162.256	153.324	145.160	
	V-THET-BAR	21.012	25.937	28.954	30.340	29.399	22.260	15.137	
IGV,ROTOR,STATOR	MACH-BAR	0.274	0.373	0.460	0.477	0.470	0.439	0.412	
	EFF-POLY	0.694	0.782	0.887	0.880	0.838	0.766	0.703	
PR = 1.3447	INCID-M	-0.8	0.7	1.9	1.1	1.2	2.3	-0.3	
TR = 1.1109	DEVIATION	11.7	10.1	9.4	10.1	10.9	10.2	8.9	
EFF-A = 0.7977	OMEGA-BAR	0.287	0.179	0.078	0.072	0.104	0.142	0.182	
EFF-P = 0.8045	LOSS PAR	0.099	0.064	0.029	0.028	0.043	0.061	0.080	
	D-FACTOR	0.858	0.713	0.599	0.571	0.579	0.628	0.658	
	TURNING	42.4	42.0	42.4	41.2	42.4	47.7	48.6	

Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 85)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.265	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3578.3	P-STATIC	9.630	9.631	9.634	9.639	9.648	9.658	9.665	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.167	-2.818	-4.289	-5.897	-7.279	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	91.293	91.237	90.931	90.420	89.635	88.630	88.013	
	VZ-BAR	91.293	91.237	90.931	90.420	89.635	88.630	88.013	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.270	0.270	0.269	0.268	0.265	0.262	0.260	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.031	10.007	9.965	10.042	10.044	10.035	10.027	10.020
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.085	9.100	9.130	9.161	9.192	9.221	9.234	
	BETABAR	27.123	29.588	31.345	31.038	30.793	29.671	24.665	
	EPSILON	-0.000	-1.128	-2.726	-4.198	-5.815	-7.275	-8.118	
	K-BAR	0.975	0.975	0.975	0.975	0.974	0.974	0.975	
	V-BAR	127.089	124.518	119.572	122.430	120.365	117.596	116.091	
	VZ-BAR	113.113	108.280	102.121	104.901	103.397	102.172	105.499	
	V-THET-BAR	57.940	61.476	62.200	63.126	61.618	58.213	48.446	
	MACH-BAR	0.379	0.371	0.356	0.364	0.358	0.350	0.345	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-6.0	-4.2	-3.8	-5.5	-7.1	-9.6	-15.3	
	OMEGABAR	0.200	0.249	0.335	0.182	0.180	0.204	0.224	
	TURNING	-27.1	-29.6	-31.3	-31.0	-30.8	-29.7	-24.7	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.031	10.007	9.965	10.042	10.044	10.035	10.027	10.020
WCOR= 1.279	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3578.3	P-STATIC	8.666	8.701	8.724	8.746	8.770	8.791	8.797	
	BETABAR	42.270	24.237	25.534	25.716	25.544	24.555	20.440	
	EPSILON	-1.170	-1.622	-3.262	-5.082	-6.734	-7.527	-8.637	
	K-BAR	0.975	0.975	0.975	0.975	0.975	0.975	0.975	
	V-BAR	152.705	150.590	146.926	149.704	148.373	146.547	145.768	
	VZ-BAR	141.370	137.315	132.576	134.877	133.871	133.290	136.590	
	V-THET-BAR	57.894	61.815	63.331	64.958	63.978	60.898	50.907	
	MACH-BAR	0.458	0.451	0.440	0.449	0.444	0.439	0.436	
	U-WHEEL	228.221	235.014	248.602	262.189	275.777	289.365	296.159	
	V-BAR-PR	221.352	221.031	227.822	238.941	250.562	264.507	280.723	
	BETABAR-PR	50.308	51.592	54.412	55.633	57.703	59.738	60.885	
	V-THET-B-P	-170.327	-173.199	-185.271	-197.232	-211.799	-228.467	-245.252	
	MACH-BAR-P	0.664	0.662	0.682	0.716	0.751	0.792	0.840	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.515	13.850	14.175	14.249	14.244	13.940	13.609	14.099
ROTOR	T-TOTAL	320.16	319.67	320.24	319.36	321.35	323.35	325.11	320.76
PR = 1.4070	P-STATIC	9.796	9.917	10.178	10.418	10.634	10.842	10.943	
TR = 1.1131	BETABAR	57.751	55.300	54.316	53.188	55.949	60.316	60.799	
EFF-A = 0.9086	EPSILON	-2.685	-1.922	-2.555	-4.229	-5.915	-6.641	-6.418	
EFF-P = 0.9106	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	237.688	241.756	241.024	234.318	227.420	212.146	204.934	
	VZ-BAR	126.830	137.627	140.592	140.400	127.345	105.068	99.982	
	V-THET-BAR	201.022	198.753	195.771	187.597	188.406	184.298	178.890	
	MACH-BAR	0.694	0.707	0.704	0.684	0.660	0.610	0.586	
	U-WHEEL	225.539	232.155	245.389	258.622	271.855	285.089	291.705	
	V-BAR-PR	129.178	141.630	149.102	157.347	152.277	145.638	150.744	
	BETABAR-PR	10.941	13.634	19.436	26.834	33.248	43.803	48.451	
	V-THET-B-P	-24.517	-33.403	-49.618	-71.025	-83.450	-100.791	-112.815	
	MACH-BAR-P	0.377	0.414	0.436	0.459	0.442	0.419	0.431	
	D-FACTOR	0.640	0.580	0.564	0.546	0.599	0.658	0.665	
	TURNING	39.4	38.0	35.6	28.8	24.5	15.9	12.4	
	INCID-M	-7.1	-4.5	-0.9	0.1	0.8	1.1	1.1	
	DEVIATION	22.8	17.4	10.8	9.2	8.1	12.6	14.6	
	OMEGABAR-P	0.263	0.146	0.062	0.035	0.097	0.203	0.258	
	LOSS PAR	0.090	0.051	0.022	0.012	0.034	0.064	0.077	
	PT-RATIO	1.347	1.384	1.422	1.418	1.418	1.389	1.377	1.4070
	EFF-AD	0.801	0.890	0.952	0.970	0.912	0.807	0.747	0.9086
	EFF-POLY	0.809	0.895	0.954	0.971	0.916	0.816	0.758	0.9106
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.515	13.840	14.168	14.247	14.253	13.945	13.809	14.099
	T-TOTAL	320.16	319.68	320.24	319.34	321.28	323.29	325.11	320.76
	P-STATIC	9.838	9.925	10.123	10.335	10.534	10.729	10.827	
	BETABAR	58.457	55.599	53.948	52.556	54.884	59.002	59.371	
	EPSILON	-0.113	-0.299	-1.915	-3.582	-4.978	-6.746	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	236.207	241.221	242.753	237.096	231.121	216.481	209.396	
	VZ-BAR	123.569	136.286	142.864	144.151	132.952	111.494	106.683	
	V-THET-BAR	201.306	199.022	196.262	188.241	189.039	185.560	180.181	
	MACH-BAR	0.689	0.706	0.710	0.693	0.672	0.623	0.600	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.553	13.150	13.879	13.905	13.782	13.489	13.363	13.667
ROTOR PLUS STATOR	T-TOTAL	320.16	319.70	320.23	319.39	320.91	323.02	325.11	320.76
PR = 1.3639	P-STATIC	12.040	12.043	12.044	12.032	12.009	11.980	11.962	
TR = 1.1131	BETABAR	13.520	12.104	10.574	10.294	9.842	7.943	5.989	
EFF-A = 0.8200	EPSILON	0.450	0.473	-0.391	-1.547	-2.570	-4.229	-5.489	
EFF-P = 0.8277	K-BAR	0.885	0.885	0.885	0.885	0.885	0.885	0.885	
	V-BAR	87.268	125.971	159.805	161.207	157.687	147.077	142.598	
	VZ-BAR	84.850	123.177	157.091	158.612	155.366	145.665	141.820	
	V-THET-BAR	20.402	26.375	29.324	28.806	26.955	20.326	14.877	
IGV,ROTOR,STATOR	MACH-BAR	0.245	0.356	0.455	0.459	0.448	0.415	0.401	
	EFF-POLY	0.731	0.788	0.893	0.858	0.814	0.783	0.751	
PR = 1.3490	INCID-M	2.8	2.9	3.1	2.0	3.4	5.4	4.6	
TR = 1.1151	DEVIATION	12.7	10.8	9.7	9.9	10.5	9.9	8.9	
EFF-A = 0.7917	OMEGA-BAR	0.262	0.176	0.072	0.087	0.127	0.142	0.150	
EFF-P = 0.7983	LOSS PAR	0.090	0.062	0.027	0.034	0.052	0.061	0.066	
	D-FACTOR	0.902	0.736	0.605	0.591	0.611	0.658	0.672	
	TURNING	44.9	43.5	43.4	42.3	45.0	51.1	53.4	

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Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 86)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.232	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3586.4	P-STATIC	9.657	9.658	9.661	9.666	9.674	9.684	9.690	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.186	-2.839	-4.311	-5.902	-7.305	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	88.728	88.671	88.371	87.870	87.108	86.126	85.531	
	VZ-BAR	88.728	88.671	88.371	87.870	87.108	86.126	85.531	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.262	0.262	0.261	0.260	0.258	0.255	0.253	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.037	10.014	9.975	10.047	10.049	10.040	10.032	10.027
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.176	9.189	9.216	9.244	9.273	9.299	9.311	
	BETABAR	26.469	29.491	31.139	31.154	30.865	29.501	25.759	
	EPSILON	-0.000	-1.143	-2.744	-4.220	-5.822	-7.300	-8.118	
	K-BAR	0.990	0.990	0.990	0.990	0.989	0.989	0.990	
	V-BAR	121.030	118.529	113.796	116.661	114.650	111.966	110.476	
	VZ-BAR	108.343	103.170	97.401	99.837	98.413	97.445	99.498	
	V-THET-BAR	53.945	58.343	58.845	60.353	58.818	55.137	48.011	
	MACH-BAR	0.360	0.353	0.338	0.347	0.341	0.333	0.328	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-6.6	-4.3	-4.0	-5.4	-7.0	-9.7	-14.2	
	OMEGABAR	0.199	0.248	0.332	0.182	0.180	0.205	0.226	
	TURNING	-26.5	-29.5	-31.1	-31.2	-30.9	-29.5	-25.8	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.037	10.014	9.976	10.048	10.049	10.040	10.032	10.027
WCOR= 1.244	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3586.4	P-STATIC	8.816	8.830	8.850	8.871	8.894	8.915	8.919	
	BETABAR	21.802	24.216	25.431	25.885	25.683	24.517	21.400	
	EPSILON	-1.170	-1.464	-3.260	-5.292	-7.149	-7.930	-6.637	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	145.133	143.006	139.520	142.276	140.905	139.032	138.264	
	VZ-BAR	134.752	130.421	126.001	128.002	126.985	126.494	128.731	
	V-THET-BAR	53.902	58.653	59.912	62.112	61.066	57.692	50.449	
	MACH-BAR	0.434	0.428	0.417	0.425	0.421	0.415	0.413	
	U-WHEEL	228.742	235.550	249.169	262.788	276.406	290.025	296.835	
	V-BAR-PR	220.742	219.780	227.366	238.025	249.995	264.537	277.988	
	BETABAR-PR	52.378	53.600	56.344	57.467	59.471	61.433	62.414	
	V-THET-B-P	-174.840	-176.897	-189.257	-200.676	-215.340	-232.333	-246.385	
	MACH-BAR-P	0.661	0.657	0.679	0.712	0.747	0.790	0.830	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.332	13.896	14.306	14.364	14.294	13.928	13.758	14.174
ROTOR	T-TOTAL	320.84	320.37	320.74	319.81	321.61	324.22	326.26	321.42
	P-STATIC	9.974	10.101	10.369	10.608	10.818	11.015	11.117	
PR = 1.4136	BETABAR	61.874	56.767	54.632	53.828	56.744	63.431	67.713	
TR = 1.1147	EPSILON	-2.885	-1.743	-2.604	-4.427	-6.232	-6.868	-6.418	
EFF-A = 0.9090	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.9107	V-BAR	226.465	236.760	237.940	230.847	222.348	205.465	196.793	
	VZ-BAR	106.759	129.762	137.726	136.249	121.935	91.932	74.634	
	V-THET-BAR	199.722	198.010	194.028	186.351	185.919	183.705	182.091	
	MACH-BAR	0.657	0.691	0.694	0.672	0.644	0.589	0.560	
	U-WHEEL	226.054	232.685	245.949	259.212	272.476	285.739	292.371	
	W-BAR-PR	109.959	134.318	147.198	154.516	149.553	137.446	133.161	
	BETABAR-PR	13.856	14.949	20.653	28.136	35.378	48.004	55.911	
	V-THET-B-P	-26.333	-34.676	-51.921	-72.861	-86.557	-102.034	-110.280	
	MACH-BAR-P	0.319	0.392	0.429	0.450	0.433	0.394	0.379	
	D-FACTOR	0.731	0.615	0.575	0.560	0.612	0.694	0.731	
	TURNING	38.5	38.7	35.7	29.3	24.1	13.4	6.5	
	INCID-M	-5.0	-2.5	1.1	1.9	2.6	2.8	2.6	
	DEVIATION	25.7	18.7	12.1	10.5	10.2	16.8	22.1	
	OMEGABAR-P	0.343	0.167	0.053	0.026	0.096	0.230	0.303	
	LOSS PAR	0.117	0.058	0.019	0.009	0.033	0.068	0.076	
	PT-RATIO	1.328	1.387	1.434	1.429	1.423	1.388	1.371	1.4136
	EFF-AD	0.746	0.878	0.960	0.977	0.914	0.785	0.715	0.9090
	EFF-POLY	0.755	0.883	0.961	0.978	0.917	0.794	0.727	0.9107
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.332	13.880	14.300	14.362	14.304	13.938	13.758	14.174
	T-TOTAL	320.84	320.37	320.74	319.77	321.51	324.13	326.26	321.42
	P-STATIC	10.003	10.104	10.318	10.539	10.735	10.922	11.022	
	BETABAR	62.554	57.076	54.316	53.287	55.812	62.047	66.113	
	EPSILON	-0.113	-0.598	-2.140	-3.700	-4.924	-6.627	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	225.370	236.254	239.508	233.165	225.493	209.300	200.587	
	VZ-BAR	103.877	128.419	139.706	139.387	126.712	98.134	81.225	
	V-THET-BAR	200.004	198.270	194.540	186.914	186.509	184.828	183.405	
	MACH-BAR	0.654	0.689	0.699	0.680	0.654	0.600	0.572	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.563	13.275	13.994	13.895	13.756	13.501	13.253	13.700
ROTOR PLUS STATOR	T-TOTAL	320.84	320.40	320.76	319.86	321.05	323.60	326.26	321.22
	P-STATIC	12.076	12.078	12.077	12.062	12.039	12.011	11.997	
PR = 1.3664	BETABAR	13.886	12.438	10.718	10.058	8.844	7.963	6.957	
TR = 1.1147	EPSILON	0.450	0.280	-0.609	-1.535	-2.309	-3.819	-5.489	
EFF-A = 0.8132	K-BAR	0.860	0.860	0.860	0.860	0.860	0.860	0.860	
EFF-P = 0.8212	V-BAR	85.089	130.642	162.972	159.520	155.267	146.149	135.588	
	VZ-BAR	82.602	127.583	160.129	157.068	153.421	144.740	134.590	
	V-THET-BAR	20.421	28.097	30.309	27.862	23.872	20.248	16.423	
IGV,ROTOR,STATOR	MACH-BAR	0.238	0.369	0.464	0.454	0.441	0.412	0.380	
	EFF-POLY	0.759	0.798	0.877	0.797	0.770	0.784	0.693	
PR = 1.3522	INCID-M	6.9	4.4	3.5	2.8	4.3	8.4	11.3	
TR = 1.1147	DEVIATION	13.1	11.1	9.8	9.7	9.5	9.9	9.9	
EFF-A = 0.7875	OMEGA-BAR	0.231	0.160	0.077	0.122	0.153	0.145	0.184	
EFF-P = 0.7939	LOSS PAR	0.080	0.057	0.029	0.048	0.063	0.062	0.081	
	D-FACTOR	0.905	0.707	0.582	0.592	0.614	0.650	0.697	
	TURNING	48.7	44.6	43.6	43.2	47.0	54.1	59.2	

Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 87)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.195	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3586.1	P-STATIC	9.686	9.687	9.690	9.695	9.702	9.712	9.717	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.187	-2.839	-4.298	-5.882	-7.287	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	85.932	85.877	85.583	85.104	84.371	83.424	82.845	
	VZ-BAR	85.932	85.877	85.583	85.104	84.371	83.424	82.845	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.254	0.254	0.253	0.252	0.249	0.247	0.245	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.043	10.022	9.986	10.053	10.054	10.045	10.037	10.033
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.241	9.253	9.278	9.305	9.331	9.356	9.367	
	BETABAR	26.228	29.258	31.129	31.046	30.633	29.117	24.820	
	EPSILON	-0.000	-1.150	-2.744	-4.207	-5.806	-7.281	-8.118	
	K-BAR	0.990	0.990	0.990	0.990	0.989	0.989	0.990	
	V-BAR	116.662	114.239	109.727	112.487	110.500	107.879	106.441	
	VZ-BAR	104.651	99.664	93.928	96.374	95.080	94.243	96.609	
	V-THET-BAR	51.558	55.828	56.725	58.012	56.303	52.493	44.680	
	MACH-BAR	0.347	0.339	0.326	0.334	0.328	0.320	0.316	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-6.9	-4.5	-4.0	-5.5	-7.2	-10.1	-15.1	
	OMEGABAR	0.198	0.247	0.329	0.180	0.180	0.206	0.227	
	TURNING	-26.2	-29.3	-31.1	-31.0	-30.6	-29.1	-24.8	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.043	10.022	9.986	10.053	10.054	10.045	10.037	10.033
WCOR= 1.207	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3586.1	P-STATIC	8.908	8.921	8.938	8.957	8.979	9.000	9.003	
	BETABAR	41.644	24.072	25.450	25.817	25.524	24.239	20.661	
	EPSILON	-1.170	-1.133	-3.221	-5.634	-7.739	-8.620	-6.637	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	139.675	137.601	134.400	137.089	135.668	133.758	133.065	
	VZ-BAR	129.827	125.633	121.358	123.406	122.427	121.963	124.507	
	V-THET-BAR	51.517	56.120	57.754	59.703	58.459	54.913	46.949	
	MACH-BAR	0.417	0.411	0.401	0.409	0.405	0.399	0.397	
	U-WHEEL	228.722	235.530	249.147	262.765	276.383	290.000	296.809	
	V-BAR-PR	219.674	219.027	226.628	237.621	249.961	264.842	279.162	
	BETABAR-PR	53.772	54.998	57.621	58.711	60.672	62.578	63.513	
	V-THET-B-P	-177.205	-179.409	-191.393	-203.062	-217.924	-235.087	-249.859	
	MACH-BAR-P	0.657	0.654	0.676	0.710	0.746	0.790	0.833	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.049	13.796	14.464	14.415	14.261	13.900	13.667	14.206
ROTOR	T-TOTAL	321.59	321.00	321.56	320.58	322.41	325.58	327.62	321.99
	P-STATIC	10.032	10.162	10.445	10.687	10.890	11.085	11.189	
PR = 1.4159	BETABAR	68.104	58.393	54.591	54.476	58.271	66.023	73.381	
TR = 1.1174	EPSILON	-2.885	-1.379	-2.453	-4.601	-6.540	-7.158	-6.418	
EFF-A = 0.8930	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.8953	V-BAR	216.253	232.192	239.535	229.730	219.154	202.352	191.200	
	VZ-BAR	80.645	121.713	138.788	133.485	115.259	82.262	54.684	
	V-THET-BAR	200.653	197.670	195.230	186.969	186.387	184.825	183.213	
	MACH-BAR	0.625	0.675	0.698	0.668	0.633	0.578	0.542	
	U-WHEEL	226.035	232.665	245.927	259.189	272.452	285.714	292.345	
	V-BAR-PR	84.544	126.644	147.764	151.785	143.863	130.284	122.066	
	BETABAR-PR	17.470	16.034	20.064	28.415	36.757	50.834	63.385	
	V-THET-B-P	-25.381	-34.995	-50.698	-72.221	-86.065	-100.890	-109.132	
	MACH-BAR-P	0.244	0.368	0.431	0.441	0.415	0.372	0.346	
	D-FACTOR	0.851	0.653	0.577	0.577	0.641	0.730	0.779	
	TURNING	36.3	39.0	37.6	30.3	23.9	11.7	0.1	
	INCID-M	-3.6	-1.1	2.4	3.2	3.8	3.9	3.7	
	DEVIATION	29.3	19.8	11.5	10.7	11.6	19.6	29.5	
	OMEGABAR-P	0.454	0.226	0.050	0.044	0.129	0.271	0.353	
	LOSS PAR	0.152	0.078	0.018	0.016	0.044	0.075	0.071	
	PT-RATIO	1.299	1.376	1.448	1.433	1.419	1.384	1.362	1.4159
	EFF-AD	0.670	0.838	0.963	0.963	0.885	0.750	0.674	0.8930
	EFF-POLY	0.682	0.845	0.965	0.964	0.890	0.761	0.687	0.8953
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.049	13.774	14.454	14.420	14.275	13.913	13.667	14.206
	T-TOTAL	321.59	321.00	321.56	320.56	322.27	325.47	327.62	321.99
	P-STATIC	10.042	10.157	10.397	10.632	10.827	11.011	11.108	
	BETABAR	68.598	58.672	54.331	54.057	57.423	64.802	71.548	
	EPSILON	-0.113	-0.928	-2.377	-3.699	-4.831	-6.579	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	215.820	231.804	240.894	231.744	221.762	205.565	194.537	
	VZ-BAR	78.756	120.552	140.465	136.032	119.406	87.551	61.573	
	V-THET-BAR	200.937	197.916	195.701	187.618	186.864	185.931	184.536	
	MACH-BAR	0.623	0.674	0.702	0.674	0.641	0.588	0.552	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.563	13.405	14.041	13.904	13.757	13.576	13.205	13.746
ROTOR PLUS STATOR	T-TOTAL	321.59	321.00	321.56	320.65	321.59	324.62	327.62	321.99
	P-STATIC	12.190	12.191	12.187	12.173	12.153	12.129	12.117	
PR = 1.3700	BETABAR	13.758	12.291	11.159	9.895	8.328	7.752	7.236	
TR = 1.1174	EPSILON	0.450	-0.092	-0.817	-1.310	-1.822	-3.316	-5.489	
EFF-A = 0.8019	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
EFF-P = 0.8105	V-BAR	74.394	131.046	160.021	154.963	149.931	43.789	126.402	
	VZ-BAR	72.260	128.047	156.995	152.657	148.350	142.475	125.395	
	V-THET-BAR	17.692	27.873	30.970	26.631	21.717	19.394	15.921	
IGV,ROTOR,STATOR	MACH-BAR	0.208	0.370	0.454	0.440	0.425	0.405	0.353	
	EFF-POLY	0.835	0.869	0.844	0.782	0.794	0.861	0.715	
PR = 1.3567	INCID-M	12.9	6.0	3.5	3.5	5.9	11.2	16.8	
TR = 1.1174	DEVIATION	13.0	11.0	10.3	9.5	9.0	9.7	10.2	
EFF-A = 0.7787	OMEGA-BAR	0.162	0.102	0.102	0.136	0.150	0.116	0.180	
EFF-P = 0.7854	LOSS PAR	0.056	0.036	0.038	0.053	0.061	0.050	0.079	
	D-FACTOR	0.956	0.700	0.597	0.614	0.636	0.661	0.738	
	TURNING	54.8	46.4	43.2	44.2	49.1	57.1	64.3	

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Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 88)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.223	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3045.4	P-STATIC	9.635	9.635	9.638	9.643	9.651	9.662	9.668	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.078	-2.703	-4.138	-5.708	-7.222	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	90.845	90.797	90.521	90.047	89.314	88.332	87.712	
	VZ-BAR	90.845	90.797	90.521	90.047	89.314	88.332	87.712	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.269	0.269	0.268	0.266	0.264	0.261	0.259	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.038	10.016	9.978	10.048	10.050	10.041	10.033	10.028
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.137	9.150	9.175	9.206	9.234	9.261	9.273	
	BETABAR	28.208	29.135	30.587	30.454	29.529	26.831	21.193	
	EPSILON	-0.000	-1.050	-2.628	-4.067	-5.643	-7.198	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	123.897	121.520	117.088	119.638	117.622	115.000	113.491	
	VZ-BAR	109.183	106.145	100.796	103.132	102.343	102.611	105.816	
	V-THET-BAR	58.563	59.162	59.579	60.639	57.971	51.905	41.028	
	MACH-BAR	0.369	0.362	0.348	0.356	0.350	0.342	0.337	
	INCID-P	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.9	-4.6	-4.6	-6.1	-8.4	-12.4	-18.7	
	OMEGABAR	0.187	0.233	0.312	0.170	0.169	0.193	0.212	
	TURNING	-28.2	-29.1	-30.6	-30.5	-29.5	-26.8	-21.2	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.038	10.016	9.978	10.049	10.050	10.041	10.033	10.028
WCOR= 1.236	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3045.4	P-STATIC	8.739	8.754	8.778	8.801	8.826	8.845	8.850	
	BETABAR	22.974	23.741	24.877	25.179	24.484	22.214	17.570	
	EPSILON	-1.170	-1.695	-3.464	-5.321	-6.785	-7.047	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	149.919	147.815	144.286	146.707	145.219	143.497	142.819	
	VZ-BAR	138.027	135.307	130.898	132.768	132.160	132.839	136.157	
	V-THET-BAR	58.516	59.509	60.696	62.415	60.186	54.250	43.112	
	MACH-BAR	0.449	0.443	0.432	0.439	0.435	0.429	0.427	
	U-WHEEL	194.231	200.013	211.577	223.141	234.705	246.269	252.051	
	V-BAR-PR	193.572	195.066	199.750	208.473	218.917	233.493	249.388	
	BETABAR-PR	44.516	46.079	49.055	50.440	52.863	55.322	56.909	
	V-THET-B-P	-135.715	-140.504	-150.881	-160.726	-174.520	-192.019	-208.940	
	MACH-BAR-P	0.580	0.584	0.598	0.624	0.655	0.698	0.746	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.935	12.259	12.602	12.539	12.232	11.928	11.752	12.319
ROTOR	T-TOTAL	307.33	307.25	308.21	307.28	307.95	308.07	308.34	307.76
-----	P-STATIC	9.208	9.276	9.443	9.590	9.708	9.819	9.871	
PR = 1.2284	BETABAR	49.398	46.324	45.687	45.066	47.747	48.070	46.256	
TR = 1.0680	EPSILON	-2.885	-2.299	-3.256	-5.043	-6.430	-6.700	-6.418	
EFF-A = 0.8911	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8935	V-BAR	209.988	217.387	221.363	213.331	198.803	182.919	173.512	
	VZ-BAR	136.660	150.125	154.638	150.676	133.684	122.222	119.973	
	V-THET-BAR	159.433	157.216	158.394	151.019	147.139	136.090	125.352	
	MACH-BAR	0.620	0.644	0.655	0.631	0.584	0.534	0.505	
	U-WHEEL	191.949	197.580	208.843	220.105	231.368	242.630	248.261	
	V-BAR-PR	180.475	155.459	162.662	165.768	158.030	162.162	171.757	
	BETABAR-PR	13.384	15.045	18.068	24.634	32.218	41.069	45.693	
	V-THET-B-P	-32.517	-40.364	-50.449	-69.086	-84.228	-106.540	-122.910	
	MACH-BAR-P	0.415	0.460	0.482	0.490	0.464	0.474	0.500	
	D-FACTOR	0.455	0.381	0.370	0.377	0.447	0.465	0.457	
	TURNING	31.1	31.0	31.0	25.8	20.6	14.3	11.2	
	INCID-R	-12.9	-10.1	-6.2	-5.1	-4.0	-3.3	-2.9	
	DEVIATION	25.2	18.8	9.5	7.0	7.0	9.8	11.8	
	OMEGABAR-P	0.248	0.106	0.009	0.017	0.135	0.207	0.242	
	LOSS PAR	0.084	0.037	0.003	0.006	0.048	0.069	0.076	
	PT-RATIO	1.189	1.224	1.263	1.247	1.217	1.188	1.171	1.2284
	EFF-AD	0.763	0.898	0.991	0.982	0.843	0.732	0.661	0.8911
	EFF-POLY	0.768	0.900	0.991	0.982	0.846	0.737	0.668	0.8935
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.935	12.252	12.598	12.547	12.239	11.931	11.752	12.319
	T-TOTAL	307.33	307.25	308.20	307.27	307.98	308.06	308.34	307.76
	P-STATIC	9.219	9.259	9.374	9.501	9.616	9.725	9.778	
	BETABAR	49.630	46.290	45.138	44.291	46.790	47.039	45.156	
	EPSILON	-0.113	-1.001	-2.782	-4.111	-5.540	-6.931	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	209.559	217.843	223.933	217.121	202.979	187.377	178.069	
	VZ-BAR	135.736	150.535	157.963	155.416	138.978	127.691	125.571	
	V-THET-BAR	159.658	157.451	158.726	151.615	147.934	137.129	126.256	
	MACH-BAR	0.619	0.645	0.664	0.643	0.597	0.548	0.519	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.590	11.961	12.381	12.367	12.022	11.682	11.499	12.088
ROTOR PLUS STATOR	T-TOTAL	307.33	307.24	308.18	307.32	307.93	308.06	308.34	307.76
----------	P-STATIC	10.612	10.617	10.619	10.605	10.580	10.551	10.534	
PR = 1.2054	BETABAR	15.301	15.093	15.046	14.975	14.771	11.653	6.681	
TR = 1.0680	EPSILON	0.450	-0.021	-0.983	-2.075	-3.218	-4.752	-5.489	
EFF-A = 0.8062	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8112	V-BAR	123.927	143.628	163.000	162.853	148.931	133.206	123.795	
	VZ-BAR	119.534	138.674	157.412	157.322	144.010	130.452	122.955	
	V-THET-BAR	32.704	37.396	42.314	42.082	37.970	26.916	14.403	
IGV,ROTOR,STATOR	MACH-BAR	0.357	0.416	0.473	0.474	0.431	0.384	0.356	
----------	EFF-POLY	0.826	0.850	0.878	0.879	0.842	0.793	0.772	
PR = 1.1931	INCID-R	-6.0	-6.4	-5.7	-6.2	-4.7	-6.6	-9.6	
TR = 1.0680	DEVIATION	14.5	13.8	14.2	14.6	15.4	13.6	9.6	
EFF-A = 0.7614	OMEGA-BAR	0.127	0.097	0.067	0.059	0.083	0.113	0.128	
EFF-P = 0.7668	LOSS PAR	0.043	0.034	0.025	0.023	0.033	0.048	0.056	
	D-FACTOR	0.623	0.540	0.471	0.455	0.497	0.549	0.586	
	TURNING	34.3	31.2	30.1	29.3	32.0	35.4	38.5	

Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 89)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
MCOR= 1.196	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 3047.1	P-STATIC	9.667	9.668	9.671	9.676	9.683	9.693	9.699	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.078	-2.734	-4.191	-5.757	-7.253	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	87.769	87.719	87.449	86.980	86.263	85.310	84.716	
	VZ-BAR	87.769	87.719	87.449	86.980	86.263	85.310	84.716	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.260	0.259	0.259	0.257	0.255	0.252	0.250	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1418	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.043	10.022	9.986	10.053	10.054	10.045	10.037	10.033
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.174	9.186	9.210	9.239	9.266	9.291	9.303	
	BETABAR	28.221	28.651	30.069	30.068	29.223	26.882	22.342	
	EPSILON	-0.000	-1.050	-2.663	-4.128	-5.711	-7.233	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	121.556	119.225	115.017	117.486	115.547	113.009	111.532	
	VZ-BAR	107.107	104.627	99.538	101.680	100.841	100.792	103.160	
	V-THET-BAR	57.481	57.164	57.629	58.857	56.412	51.097	42.397	
	MACH-BAR	0.362	0.355	0.342	0.349	0.343	0.336	0.331	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.9	-5.1	-5.1	-6.4	-8.7	-12.4	-17.6	
	OMEGABAR	0.190	0.237	0.316	0.173	0.172	0.197	0.217	
	TURNING	-28.2	-28.7	-30.1	-30.1	-29.2	-26.9	-22.3	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.043	10.022	9.986	10.053	10.054	10.045	10.037	10.033
MCOR= 1.207	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 3047.1	P-STATIC	8.789	8.803	8.825	8.848	8.871	8.890	8.894	
	BETABAR	22.977	23.347	24.474	24.867	24.246	22.283	18.523	
	EPSILON	-1.170	-1.695	-3.446	-5.360	-6.828	-6.985	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	147.134	145.085	141.736	144.061	142.611	140.935	140.233	
	VZ-BAR	135.460	133.206	129.001	130.705	130.032	130.406	132.968	
	V-THET-BAR	57.436	57.496	58.718	60.580	58.563	53.439	44.551	
	MACH-BAR	0.441	0.434	0.424	0.431	0.427	0.421	0.419	
	U-WHEEL	194.345	200.130	211.701	223.271	234.842	246.413	252.199	
	W-BAR-PR	192.597	195.166	200.115	208.694	219.052	232.908	246.573	
	BETABAR-PR	45.305	46.956	49.860	51.221	53.584	55.948	57.366	
	V-THET-B-P	-136.909	-142.633	-152.983	-162.692	-176.279	-192.975	-207.648	
	MACH-BAR-P	0.577	0.584	0.598	0.624	0.655	0.696	0.737	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.107	12.366	12.716	12.714	12.365	12.190	12.035	12.477
ROTOR	T-TOTAL	308.34	308.25	309.29	308.65	309.16	309.56	310.24	309.00
-----	P-STATIC	9.380	9.455	9.629	9.787	9.915	10.036	10.093	
PR = 1.2436	BETABAR	51.616	48.525	47.863	47.321	50.645	50.651	50.250	
TR = 1.0723	EPSILON	-2.885	-2.299	-3.232	-5.004	-6.376	-6.689	-6.418	
EFF-A = 0.8903	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8924	W-BAR	208.674	213.809	217.829	211.309	198.859	183.298	174.863	
	VZ-BAR	129.573	141.606	146.144	143.247	123.570	116.217	111.815	
	V-THET-BAR	163.572	160.186	161.529	155.342	150.663	141.745	134.441	
	MACH-BAR	0.615	0.631	0.643	0.623	0.570	0.534	0.508	
	U-WHEEL	192.062	197.696	208.965	220.234	231.503	242.772	248.406	
	W-BAR-PR	132.668	146.493	153.652	157.273	147.689	154.006	159.658	
	BETABAR-PR	12.401	14.830	17.982	24.374	33.195	40.994	45.586	
	V-THET-B-P	-28.490	-37.510	-47.436	-64.892	-80.839	-101.027	-113.965	
	MACH-BAR-P	0.391	0.432	0.453	0.463	0.432	0.449	0.464	
	D-FACTOR	0.502	0.436	0.425	0.430	0.504	0.509	0.514	
	TURNING	32.9	32.1	31.9	26.8	20.4	15.0	11.8	
	INCID-M	-12.1	-9.2	-5.4	-4.3	-3.3	-2.7	-2.4	
	DEVIATION	24.3	18.6	9.4	6.7	8.0	9.8	11.7	
	OMEGABAR-P	0.240	0.121	0.028	0.025	0.147	0.194	0.241	
	LOSS PAR	0.082	0.042	0.010	0.009	0.052	0.064	0.076	
	PT-RATIO	1.205	1.234	1.273	1.264	1.230	1.214	1.199	1.2436
	EFF-AD	0.784	0.889	0.975	0.975	0.837	0.767	0.696	0.8903
	EFF-POLY	0.789	0.891	0.975	0.975	0.841	0.772	0.703	0.8924

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Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 89)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.107	12.360	12.710	12.724	12.371	12.192	12.035	12.477
	T-TOTAL	308.34	308.24	309.28	308.64	309.16	309.56	310.24	309.00
	P-STATIC	9.403	9.450	9.571	9.705	9.828	9.943	10.000	
	BETABAR	52.046	48.642	47.390	46.540	49.646	49.543	49.063	
	EPSILON	-0.113	-0.928	-2.704	-4.011	-5.492	-6.865	-7.979	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	207.739	213.783	219.899	214.876	198.781	187.631	179.252	
	VZ-BAR	127.766	141.263	148.874	147.802	128.716	121.748	117.452	
	V-THET-BAR	163.803	160.448	161.840	155.968	151.478	142.768	135.412	
	MACH-BAR	0.612	0.631	0.649	0.634	0.583	0.548	0.521	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.691	12.061	12.508	12.515	12.146	11.880	11.691	12.229
ROTOR PLUS STATOR	T-TOTAL	308.34	308.23	309.23	308.68	309.14	309.54	310.24	309.00
	P-STATIC	10.831	10.836	10.840	10.828	10.805	10.779	10.764	
PR = 1.2188	BETABAR	15.858	15.616	15.560	15.583	15.399	12.972	9.910	
TR = 1.0723	EPSILON	0.450	0.029	-0.918	-1.999	-3.161	-4.746	-5.489	
EFF-A = 0.8048	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8102	V-BAR	115.721	136.510	157.796	158.505	142.904	130.521	120.637	
	VZ-BAR	111.317	131.472	152.013	152.679	137.773	127.187	118.837	
	V-THET-BAR	31.620	36.743	42.327	42.580	37.947	29.304	20.761	
IGV,ROTOR,STATOR	MACH-BAR	0.332	0.394	0.457	0.459	0.412	0.375	0.346	
	EFF-POLY	0.801	0.848	0.888	0.863	0.838	0.756	0.716	
PR = 1.2071	INCID-H	-3.6	-4.0	-3.4	-4.0	-1.9	-4.1	-5.7	
TR = 1.0723	DEVIATION	15.1	14.3	14.7	15.2	16.0	15.0	12.8	
EFF-A = 0.7652	OMEGA-BAR	0.154	0.103	0.064	0.069	0.088	0.139	0.169	
EFF-P = 0.7704	LOSS PAR	0.052	0.036	0.023	0.027	0.035	0.059	0.074	
	D-FACTOR	0.668	0.571	0.489	0.477	0.523	0.571	0.614	
	TURNING	36.2	33.0	31.8	31.0	34.2	36.6	39.2	

Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 90)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.169	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
HCOR= 3029.8	P-STATIC	9.680	9.681	9.683	9.688	9.695	9.704	9.710	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.078	-2.703	-4.129	-5.696	-7.222	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	86.545	86.497	86.235	85.787	85.095	84.157	83.568	
	VZ-BAR	86.545	86.497	86.235	85.787	85.095	84.157	83.568	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.256	0.256	0.255	0.254	0.252	0.249	0.247	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.047	10.026	9.993	10.057	10.057	10.049	10.042	10.038
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.220	9.232	9.254	9.282	9.309	9.332	9.343	
	BETABAR	28.080	28.843	30.435	30.160	29.019	26.219	21.999	
	EPSILON	-0.000	-1.050	-2.628	-4.058	-5.641	-7.218	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	118.482	116.195	112.087	114.476	112.516	110.028	108.641	
	VZ-BAR	104.536	101.781	96.642	98.978	98.390	98.701	100.731	
	V-THET-BAR	55.770	56.052	56.778	57.515	54.581	48.611	40.695	
	MACH-BAR	0.352	0.345	0.333	0.340	0.334	0.327	0.322	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-5.0	-4.9	-4.7	-6.3	-8.9	-13.0	-17.9	
	OMEGABAR	0.186	0.233	0.309	0.168	0.169	0.194	0.213	
	TURNING	-28.1	-28.8	-30.4	-30.2	-29.0	-26.2	-22.0	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.047	10.026	9.993	10.057	10.057	10.049	10.042	10.038
WCOR= 1.180	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
HCOR= 3029.8	P-STATIC	8.856	8.870	8.891	8.913	8.935	8.952	8.956	
	BETABAR	22.906	23.544	24.806	24.981	24.103	21.755	18.265	
	EPSILON	-1.170	-1.672	-3.440	-5.390	-6.862	-7.020	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	143.172	141.147	137.875	140.161	138.217	137.104	136.443	
	VZ-BAR	131.882	129.397	125.153	127.049	126.622	127.335	129.569	
	V-THET-BAR	55.725	56.380	57.845	59.192	56.650	50.815	42.762	
	MACH-BAR	0.428	0.422	0.412	0.419	0.414	0.409	0.407	
	U-WHEEL	193.236	198.988	210.493	221.998	233.503	245.008	250.760	
	V-BAR-PR	190.531	192.567	197.397	205.574	217.511	232.220	245.054	
	BETABAR-PR	46.197	47.780	50.651	52.031	54.397	56.745	58.080	
	V-THET-B-P	-137.511	-142.608	-152.648	-162.806	-176.853	-194.193	-207.998	
	MACH-BAR-P	0.570	0.576	0.590	0.617	0.650	0.694	0.732	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.188	12.455	12.778	12.781	12.452	12.304	12.178	12.561
ROTOR	T-TOTAL	309.21	308.97	309.81	309.06	309.84	310.56	311.31	309.65
-----	P-STATIC	9.517	9.598	9.771	9.931	10.064	10.187	10.285	
PR = 1.2513	BETABAR	54.201	50.707	49.804	48.760	52.439	52.592	52.390	
TR = 1.0746	EPSILON	-2.885	-2.275	-3.225	-5.092	-6.410	-6.693	-6.418	
EFF-A = 0.8893	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8908	V-BAR	205.899	211.040	214.302	207.776	191.667	181.014	173.551	
	VZ-BAR	120.438	133.650	138.310	136.971	116.846	109.963	105.916	
	V-THET-BAR	167.000	163.316	163.693	156.234	151.929	143.785	137.483	
	MACH-BAR	0.605	0.622	0.631	0.611	0.560	0.526	0.503	
	U-WHEEL	190.966	196.568	207.773	218.977	230.182	241.387	246.989	
	V-BAR-PR	122.799	137.729	145.168	150.670	140.655	147.045	152.347	
	BETABAR-PR	11.254	13.963	17.676	24.615	33.813	41.586	45.955	
	V-THET-B-P	-23.966	-33.252	-44.079	-62.743	-78.253	-97.602	-109.506	
	MACH-BAR-P	0.361	0.406	0.427	0.483	0.411	0.428	0.441	
	D-FACTOR	0.558	0.482	0.466	0.460	0.540	0.545	0.549	
	TURNING	34.9	33.8	33.0	27.4	20.6	15.2	12.1	
	INCID-M	-11.2	-8.4	-4.6	-3.5	-2.5	-1.9	-1.7	
	DEVIATION	23.1	17.7	9.1	6.9	8.6	10.4	12.1	
	OMEGABAR-P	0.261	0.132	0.037	0.024	0.153	0.203	0.246	
	LOSS PAR	0.090	0.046	0.013	0.009	0.053	0.067	0.077	
	PT-RATIO	1.213	1.242	1.278	1.270	1.238	1.225	1.213	1.2513
	EFF-AD	0.778	0.886	0.968	0.976	0.838	0.768	0.706	0.8893
	EFF-POLY	0.783	0.889	0.969	0.976	0.842	0.774	0.713	0.8908
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.188	12.449	12.772	12.790	12.458	12.306	12.178	12.561
	T-TOTAL	309.21	308.97	309.80	309.04	309.82	310.55	311.31	309.65
	P-STATIC	9.529	9.585	9.716	9.860	9.984	10.105	10.164	
	BETABAR	54.516	50.725	49.321	48.063	51.442	51.577	51.309	
	EPSILON	-0.113	-0.927	-2.320	-3.985	-5.181	-6.865	-7.979	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	205.379	211.348	216.279	210.878	195.326	184.832	177.474	
	VZ-BAR	119.217	133.796	140.973	140.934	121.752	114.865	110.906	
	V-THET-BAR	167.236	163.590	164.021	156.866	152.734	144.806	138.476	
	MACH-BAR	0.603	0.623	0.637	0.621	0.571	0.538	0.515	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.772	12.124	12.572	12.592	12.233	11.972	11.813	12.307
ROTOR PLUS STATOR	T-TOTAL	309.21	308.97	309.77	309.09	309.77	310.53	311.31	309.65
-----------------	P-STATIC	10.980	10.985	10.991	10.981	10.959	10.934	10.919	
PR = 1.2261	BETABAR	15.645	15.808	15.967	15.872	15.292	12.830	9.136	
TR = 1.0746	EPSILON	0.450	0.061	-0.938	-1.981	-3.130	-4.700	-5.489	
EFF-A = 0.8043	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8099	V-BAR	110.627	131.195	153.149	154.391	138.759	126.287	117.876	
	VZ-BAR	106.529	126.232	147.240	148.457	133.847	123.130	116.381	
	V-THET-BAR	29.833	35.744	42.128	42.210	36.595	28.048	18.716	
IGV,ROTOR,STATOR	MACH-BAR	0.317	0.378	0.442	0.447	0.399	0.362	0.337	
----------------	EFF-POLY	0.802	0.836	0.887	0.868	0.839	0.741	0.701	
PR = 1.2148	INCID-M	-1.1	-1.9	-1.5	-2.4	-0.1	-2.1	-3.5	
TR = 1.0746	DEVIATION	14.9	14.5	15.1	15.5	15.9	14.8	12.1	
EFF-A = 0.7685	OMEGA-BAR	0.156	0.113	0.065	0.068	0.091	0.152	0.181	
EFF-P = 0.7730	LOSS PAR	0.053	0.040	0.024	0.026	0.036	0.064	0.079	
	D-FACTOR	0.698	0.598	0.507	0.489	0.542	0.595	0.638	
	TURNING	38.9	34.9	33.4	32.2	36.2	38.7	42.2	

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Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 91)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.134	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3043.3	P-STATIC	9.708	9.708	9.711	9.715	9.722	9.731	9.737	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.078	-2.687	-4.132	-5.723	-7.243	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	83.782	83.740	83.481	83.043	82.360	81.442	80.869	
	VZ-BAR	83.782	83.740	83.481	83.043	82.360	81.442	80.869	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.248	0.248	0.247	0.245	0.243	0.241	0.239	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1418	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.053	10.033	10.002	10.062	10.062	10.053	10.046	10.044
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.297	9.309	9.332	9.356	9.380	9.401	9.410	
	BETABAR	28.007	28.902	29.929	29.983	28.823	26.176	22.331	
	EPSILON	-0.000	-1.044	-2.605	-4.061	-5.656	-7.227	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	113.050	110.703	106.590	109.124	107.216	104.826	103.555	
	VZ-BAR	99.811	96.915	92.376	94.559	93.933	94.071	95.790	
	V-THET-BAR	53.086	53.502	53.181	54.467	51.690	46.242	39.386	
	MACH-BAR	0.336	0.329	0.316	0.324	0.318	0.311	0.307	
	INCID-B	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-5.1	-4.9	-5.2	-6.6	-9.1	-13.1	-17.6	
	OMEGABAR	0.186	0.233	0.308	0.168	0.170	0.196	0.216	
	TURNING	-28.0	-28.9	-29.9	-29.9	-28.8	-26.2	-22.3	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.053	10.033	10.002	10.062	10.062	10.053	10.046	10.044
WCOR= 1.144	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3043.3	P-STATIC	8.972	8.984	9.002	9.021	9.042	9.058	9.061	
	BETABAR	22.946	23.668	24.428	24.859	23.995	21.784	18.591	
	EPSILON	-1.170	-1.577	-3.451	-5.582	-7.218	-7.332	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	136.061	134.056	131.012	133.357	131.924	130.317	129.682	
	VZ-BAR	125.295	122.780	119.284	121.001	120.523	121.008	122.915	
	V-THET-BAR	53.044	53.814	54.180	56.062	53.648	48.361	41.344	
	MACH-BAR	0.406	0.400	0.391	0.398	0.394	0.389	0.387	
	U-WHEEL	194.098	199.875	211.431	222.988	234.544	246.100	251.878	
	V-BAR-PR	188.667	190.814	197.376	206.170	217.371	231.828	243.788	
	BETABAR-PR	48.386	49.948	52.816	54.061	56.324	58.533	59.723	
	V-THET-B-P	-141.054	-146.061	-157.251	-166.926	-180.896	-197.739	-210.534	
	MACH-BAR-P	0.563	0.569	0.589	0.615	0.648	0.691	0.727	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.249	12.562	12.980	12.940	12.616	12.443	12.289	12.722
ROTOR	T-TOTAL	310.07	309.85	310.73	310.02	310.84	312.11	312.40	310.67
	P-STATIC	9.718	9.802	9.988	10.153	10.291	10.419	10.481	
PR = 1.2667	BETABAR	57.462	52.927	50.571	50.317	54.419	56.685	56.972	
TR = 1.0781	EPSILON	-2.885	-2.013	-3.088	-5.125	-6.551	-6.770	-6.418	
EFF-A = 0.8973	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.8984	V-BAR	199.641	206.381	212.197	208.179	187.889	176.053	167.043	
	VZ-BAR	107.380	124.417	138.772	130.379	109.338	96.698	91.048	
	V-THET-BAR	168.303	168.638	163.903	157.130	152.790	147.119	140.049	
	MACH-BAR	0.584	0.606	0.623	0.599	0.547	0.510	0.482	
	U-WHEEL	191.817	197.444	208.699	219.954	231.208	242.463	248.090	
	V-BAR-PR	109.924	128.674	142.025	144.746	134.580	135.831	141.289	
	BETABAR-PR	12.352	14.759	18.385	25.731	35.660	44.585	49.879	
	V-THET-B-P	-23.515	-32.806	-44.796	-62.824	-78.419	-95.384	-108.041	
	MACH-BAR-P	0.322	0.378	0.417	0.424	0.392	0.393	0.408	
	D-FACTOR	0.629	0.532	0.490	0.496	0.576	0.605	0.600	
	TURNING	36.0	35.2	34.4	28.3	20.7	13.9	9.8	
	INCID-M	-9.0	-6.2	-2.5	-1.5	-0.6	-0.1	-0.1	
	DEVIATION	24.2	18.5	9.8	8.1	10.5	13.4	16.0	
	OMEGABAR-P	0.292	0.144	0.016	0.020	0.147	0.225	0.259	
	LOSS PAR	0.100	0.050	0.006	0.007	0.050	0.071	0.075	
	PT-RATIO	1.218	1.252	1.297	1.285	1.254	1.238	1.223	1.2667
	EFF-AD	0.765	0.882	0.987	0.981	0.850	0.758	0.705	0.8973
	EFF-POLY	0.771	0.885	0.987	0.981	0.854	0.764	0.713	0.8984
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.249	12.553	12.973	12.950	12.623	12.446	12.289	12.722
	T-TOTAL	310.07	309.84	310.71	310.02	310.80	312.10	312.40	310.67
	P-STATIC	9.732	9.795	9.939	10.090	10.225	10.349	10.410	
	BETABAR	57.857	53.062	50.161	49.668	53.495	55.683	55.845	
	EPSILON	-0.113	-1.012	-2.564	-4.051	-5.530	-7.046	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	199.052	206.368	213.885	207.002	191.004	179.403	170.461	
	VZ-BAR	105.903	124.024	137.021	133.977	113.636	101.142	95.703	
	V-THET-BAR	168.541	168.910	168.231	157.796	153.511	148.174	141.060	
	MACH-BAR	0.583	0.606	0.629	0.608	0.557	0.520	0.493	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.864	12.233	12.707	12.715	12.361	12.134	11.924	12.441
ROTOR PLUS STATOR	T-TOTAL	310.07	309.83	310.67	310.05	310.66	312.06	312.40	310.67
	P-STATIC	11.210	11.212	11.212	11.208	11.189	11.169	11.158	
PR = 1.2387	BETABAR	16.446	16.477	16.676	16.749	15.398	12.412	8.143	
TR = 1.0781	EPSILON	0.450	0.021	-0.849	-1.795	-2.862	-4.543	-5.489	
EFF-A = 0.8077	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8135	V-BAR	100.076	123.572	148.088	148.723	132.363	121.073	108.599	
	VZ-BAR	95.982	118.497	141.859	142.413	127.593	118.236	107.505	
	V-THET-BAR	28.333	35.051	42.497	42.859	35.141	26.036	15.382	
IGV,ROTOR,STATOR	MACH-BAR	0.286	0.355	0.427	0.429	0.380	0.346	0.309	
	EFF-POLY	0.815	0.838	0.855	0.847	0.822	0.752	0.696	
PR = 1.2280	INCID-M	2.2	0.4	-0.7	-0.8	2.0	2.1	1.1	
TR = 1.0781	DEVIATION	15.7	15.2	15.8	16.4	16.0	14.4	11.1	
EFF-A = 0.7762	OMEGA-BAR	0.153	0.116	0.087	0.082	0.109	0.149	0.194	
EFF-P = 0.7804	LOSS PAR	0.052	0.040	0.032	0.031	0.044	0.063	0.085	
	D-FACTOR	0.747	0.629	0.524	0.508	0.570	0.626	0.693	
	TURNING	41.4	36.6	33.5	32.9	38.1	43.3	47.7	

Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 92)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.094	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3037.4	P-STATIC	9.730	9.730	9.732	9.736	9.743	9.751	9.756	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.025	-2.628	-4.096	-5.691	-7.241	-8.067	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	81.590	81.552	81.313	80.892	80.235	79.343	78.783	
	VZ-BAR	81.590	81.552	81.313	80.892	80.235	79.343	78.783	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.241	0.241	0.240	0.239	0.237	0.234	0.233	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.058	10.039	10.011	10.067	10.066	10.058	10.052	10.050
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.357	9.369	9.391	9.413	9.436	9.455	9.464	
	BETABAR	29.790	29.576	29.852	29.963	28.702	25.814	23.117	
	EPSILON	-0.000	-0.987	-2.557	-4.019	-5.625	-7.231	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	108.759	106.406	102.420	104.879	102.979	100.655	99.449	
	VZ-BAR	94.386	92.541	88.830	90.862	90.325	90.607	91.864	
	V-THET-BAR	54.034	52.519	50.981	52.381	49.457	43.831	39.045	
	MACH-BAR	0.323	0.316	0.304	0.311	0.305	0.298	0.295	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-3.3	-4.2	-5.3	-6.5	-9.2	-13.4	-16.8	
	OMEGABAR	0.182	0.229	0.301	0.163	0.167	0.193	0.212	
	TURNING	-29.8	-29.6	-29.9	-30.0	-28.7	-25.8	-23.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.058	10.039	10.012	10.068	10.066	10.058	10.052	10.050
WCOR= 1.103	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3037.4	P-STATIC	9.059	9.071	9.088	9.106	9.126	9.142	9.144	
	BETABAR	24.428	24.259	24.416	24.925	23.941	21.544	19.280	
	EPSILON	-1.170	-1.478	-3.513	-5.833	-7.681	-7.632	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	130.558	128.563	125.668	127.946	126.447	124.848	124.257	
	VZ-BAR	118.871	117.211	114.429	116.029	115.567	116.124	117.288	
	V-THET-BAR	53.991	52.821	51.946	53.920	51.311	45.846	41.028	
	MACH-BAR	0.389	0.383	0.374	0.381	0.377	0.372	0.370	
	U-WHEEL	193.724	199.490	211.024	222.558	234.092	245.626	251.393	
	V-BAR-PR	183.454	187.755	195.961	204.700	216.253	231.079	240.853	
	BETABAR-PR	49.612	51.368	54.270	55.469	57.694	59.831	60.858	
	V-THET-B-P	-139.733	-146.669	-159.078	-168.638	-182.781	-199.780	-210.365	
	MACH-BAR-P	0.547	0.560	0.584	0.610	0.644	0.688	0.717	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.279	12.651	13.100	13.038	12.619	12.481	12.370	12.804
ROTOR	T-TOTAL	311.02	310.56	311.67	310.54	311.45	312.70	313.38	311.33
------	P-STATIC	9.831	9.925	10.121	10.291	10.425	10.553	10.615	
PR = 1.2741	BETABAR	62.823	55.061	52.111	51.259	56.963	59.258	61.293	
TR = 1.0808	EPSILON	-2.885	-1.961	-3.138	-5.337	-6.843	-6.887	-6.418	
EFF-A = 0.8937	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.8951	V-BAR	196.122	204.426	210.916	201.942	182.274	171.489	164.075	
	VZ-BAR	89.577	117.079	129.531	126.381	99.382	87.668	78.810	
	V-THET-BAR	174.470	167.522	166.455	157.505	152.785	147.383	143.909	
	MACH-BAR	0.573	0.599	0.618	0.591	0.529	0.495	0.472	
	U-WHEEL	191.448	197.068	208.297	219.530	230.763	241.996	247.612	
	V-BAR-PR	91.172	120.755	136.123	140.804	126.350	129.023	130.252	
	BETABAR-PR	10.732	14.136	17.901	26.146	38.130	47.175	52.767	
	V-THET-B-P	-16.978	-29.541	-41.841	-62.025	-77.978	-94.613	-103.704	
	MACH-BAR-P	0.266	0.354	0.399	0.412	0.367	0.373	0.375	
	D-FACTOR	0.730	0.574	0.526	0.518	0.618	0.638	0.648	
	TURNING	38.9	37.2	36.4	29.3	19.6	12.7	8.1	
	INCID-M	-7.8	-4.8	-1.0	-0.1	0.8	1.2	1.1	
	DEVIATION	22.6	17.9	9.3	8.5	12.9	16.0	18.9	
	OMEGABAR-P	0.352	0.158	0.028	0.015	0.173	0.240	0.281	
	LOSS PAR	0.121	0.055	0.010	0.005	0.058	0.072	0.076	
	PT-RATIO	1.221	1.260	1.308	1.294	1.254	1.241	1.231	1.2741
	EFF-AD	0.740	0.879	0.978	0.987	0.827	0.749	0.699	0.8937
	EFF-POLY	0.747	0.882	0.978	0.986	0.832	0.755	0.707	0.8951
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.279	12.642	13.092	13.051	12.631	12.484	12.370	12.804
	T-TOTAL	311.02	310.56	311.65	310.54	311.41	312.68	313.38	311.33
	P-STATIC	9.838	9.915	10.075	10.238	10.371	10.493	10.554	
	BETABAR	63.173	55.187	51.712	50.714	56.067	59.296	60.154	
	EPSILON	-0.113	-1.227	-2.765	-4.289	-5.482	-7.025	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	195.788	204.535	212.473	204.450	185.083	174.808	167.111	
	VZ-BAR	88.357	116.776	131.650	129.460	103.330	91.664	83.165	
	V-THET-BAR	174.716	167.856	166.771	158.239	153.537	148.374	144.947	
	MACH-BAR	0.572	0.599	0.623	0.599	0.538	0.504	0.482	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.955	12.346	12.800	12.767	12.363	12.197	12.026	12.505
ROTOR PLUS STATOR	T-TOTAL	311.02	310.55	311.60	310.60	311.20	312.58	313.38	311.33
----------	P-STATIC	11.313	11.315	11.314	11.306	11.292	11.275	11.265	
PR = 1.2443	BETABAR	17.745	17.309	17.079	16.947	15.422	12.289	7.575	
TR = 1.0804	EPSILON	0.450	-0.140	-0.932	-1.720	-2.560	-4.313	-5.489	
EFF-A = 0.8017	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8077	V-BAR	98.901	123.779	147.246	145.949	126.437	118.133	107.957	
	VZ-BAR	94.196	118.176	140.752	139.611	121.884	115.418	107.015	
	V-THET-BAR	30.144	36.820	43.244	42.543	33.624	25.153	18.231	
IGV,ROTOR,STATOR	MACH-BAR	0.282	0.355	0.423	0.420	0.362	0.337	0.307	
----------	EFF-POLY	0.838	0.847	0.839	0.813	0.815	0.764	0.697	
PR = 1.2343	INCID-M	7.5	2.5	0.9	0.2	4.6	4.7	5.4	
TR = 1.0804	DEVIATION	17.0	16.0	16.2	16.6	16.1	14.3	10.5	
EFF-A = 0.7731	OMEGA-BAR	0.133	0.109	0.097	0.101	0.118	0.144	0.189	
EFF-P = 0.7778	LOSS PAR	0.045	0.038	0.035	0.038	0.047	0.061	0.083	
	D-FACTOR	0.757	0.628	0.529	0.518	0.594	0.635	0.704	
	TURNING	45.4	37.9	34.6	33.8	40.6	46.0	52.6	

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Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 93)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.060	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3052.2	P-STATIC	9.765	9.765	9.767	9.770	9.776	9.783	9.788	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.994	-2.560	-4.021	-5.644	-7.207	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	77.863	77.828	77.632	77.268	76.684	75.881	75.372	
	VZ-BAR	77.863	77.828	77.632	77.268	76.684	75.881	75.372	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.230	0.230	0.229	0.228	0.226	0.224	0.223	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.063	10.045	10.019	10.071	10.070	10.062	10.057	10.055
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.405	9.416	9.436	9.459	9.480	9.499	9.508	
	BETABAR	31.005	30.394	30.288	29.955	28.586	25.674	22.110	
	EPSILON	-0.000	-0.956	-2.485	-3.981	-5.572	-7.210	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	105.237	102.938	99.131	101.390	99.491	97.176	95.992	
	VZ-BAR	90.201	88.791	85.600	87.846	87.362	87.578	88.934	
	V-THET-BAR	54.208	52.082	49.996	50.625	47.604	42.102	36.130	
	MACH-BAR	0.312	0.305	0.294	0.301	0.295	0.288	0.284	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-2.1	-3.4	-4.9	-6.6	-9.3	-13.6	-17.8	
	OMEGABAR	0.188	0.236	0.309	0.167	0.172	0.200	0.218	
	TURNING	-31.0	-30.4	-30.3	-30.0	-28.6	-25.7	-22.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.063	10.045	10.019	10.072	10.070	10.062	10.057	10.055
WCOR= 1.068	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 3052.2	P-STATIC	9.129	9.140	9.156	9.173	9.193	9.208	9.210	
	BETABAR	25.446	24.967	24.834	24.958	23.888	21.451	18.473	
	EPSILON	-1.170	-1.301	-3.547	-6.037	-8.062	-7.976	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	126.063	124.087	121.293	123.495	121.970	120.358	119.821	
	VZ-BAR	113.834	112.491	110.077	111.963	111.521	112.017	113.647	
	V-THET-BAR	54.165	52.377	50.942	52.109	49.392	44.016	37.965	
	MACH-BAR	0.376	0.369	0.361	0.368	0.363	0.358	0.356	
	U-WHEEL	194.666	200.460	212.050	223.640	235.230	246.820	252.615	
	V-BAR-PR	180.827	185.969	195.124	204.839	216.734	231.685	242.879	
	BETABAR-PR	50.986	52.775	55.656	56.865	59.030	61.085	62.101	
	V-THET-B-P	-140.500	-148.083	-161.108	-171.531	-185.837	-202.804	-214.650	
	MACH-BAR-P	0.539	0.554	0.581	0.610	0.645	0.689	0.723	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.329	12.793	13.173	13.077	12.653	12.509	12.411	12.877
ROTOR	T-TOTAL	311.79	311.18	311.79	310.68	311.57	313.03	314.10	311.57
-----	P-STATIC	9.968	10.072	10.274	10.443	10.575	10.698	10.758	
PR = 1.2807	BETABAR	68.005	56.699	52.956	52.781	58.592	61.656	64.320	
TR = 1.0812	EPSILON	-2.885	-1.759	-3.150	-5.621	-7.205	-7.076	-6.418	
EFF-A = 0.9042	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9051	V-BAR	192.109	203.184	207.205	197.099	176.881	165.791	158.898	
	VZ-BAR	71.950	111.560	124.826	120.858	92.180	78.724	68.857	
	V-THET-BAR	178.126	169.725	165.386	155.696	150.961	145.901	143.204	
	MACH-BAR	0.559	0.594	0.606	0.576	0.513	0.478	0.456	
	U-WHEEL	192.378	198.022	209.309	220.597	231.885	243.172	248.816	
	V-BAR-PR	73.348	115.101	132.330	137.200	122.670	125.181	126.076	
	BETABAR-PR	11.204	14.194	19.385	28.238	41.280	51.008	56.896	
	V-THET-B-P	-14.252	-28.297	-43.923	-64.901	-80.923	-97.271	-105.612	
	MACH-BAR-P	0.214	0.337	0.387	0.401	0.356	0.361	0.362	
	D-FACTOR	0.832	0.604	0.544	0.537	0.637	0.658	0.673	
	TURNING	39.8	38.6	36.3	28.6	17.8	10.1	5.2	
	INCID-M	-6.4	-3.4	0.4	1.3	2.1	2.4	2.3	
	DEVIATION	23.1	17.9	10.8	10.6	16.1	19.8	23.0	
	OMEGABAR-P	0.388	0.144	0.011	0.011	0.168	0.244	0.294	
	LOSS PAR	0.133	0.050	0.004	0.004	0.053	0.068	0.072	
	PT-RATIO	1.225	1.273	1.314	1.298	1.257	1.243	1.238	1.2807
	EFF-AD	0.730	0.896	0.991	0.991	0.832	0.745	0.689	0.9042
	EFF-POLY	0.737	0.898	0.991	0.990	0.837	0.752	0.697	0.9051
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.329	12.783	13.168	13.089	12.664	12.512	12.411	12.877
	T-TOTAL	311.79	311.18	311.78	310.70	311.53	313.00	314.10	311.57
	P-STATIC	9.970	10.059	10.233	10.397	10.526	10.644	10.703	
	BETABAR	68.253	56.815	52.597	51.723	57.716	60.668	63.378	
	EPSILON	-0.113	-1.493	-2.957	-4.402	-5.230	-6.845	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	192.047	203.375	208.682	199.323	179.455	168.478	161.627	
	VZ-BAR	71.154	111.322	126.756	123.477	95.857	82.541	72.929	
	V-THET-BAR	178.378	170.100	165.774	156.470	151.700	146.867	144.238	
	MACH-BAR	0.559	0.595	0.611	0.583	0.521	0.486	0.465	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.970	12.424	12.840	12.814	12.398	12.193	12.097	12.546
ROTOR PLUS STATOR	T-TOTAL	311.79	311.18	311.76	310.75	311.30	312.80	314.10	311.57
----------	P-STATIC	11.399	11.404	11.407	11.397	11.378	11.360	11.349	
PR = 1.2477	BETABAR	17.096	16.842	17.060	16.848	15.567	12.154	8.141	
TR = 1.0812	EPSILON	0.450	-0.429	-1.059	-1.700	-2.412	-4.115	-5.489	
EFF-A = 0.8037	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8097	V-BAR	93.210	122.785	144.297	143.368	123.110	112.155	106.761	
	VZ-BAR	89.091	117.519	137.947	137.214	118.592	109.634	105.686	
	V-THET-BAR	27.400	35.576	42.333	41.553	33.044	23.621	15.118	
IGV,ROTOR,STATOR	MACH-BAR	0.265	0.351	0.415	0.413	0.352	0.320	0.303	
----------	EFF-POLY	0.818	0.814	0.811	0.807	0.805	0.733	0.695	
PR = 1.2383	INCID-M	12.6	4.2	1.8	1.2	6.2	7.0	8.4	
TR = 1.0812	DEVIATION	16.3	15.5	16.2	16.5	16.2	14.1	11.1	
EFF-A = 0.7776	OMEGA-BAR	0.152	0.132	0.112	0.102	0.124	0.171	0.184	
EFF-P = 0.7819	LOSS PAR	0.052	0.046	0.041	0.039	0.050	0.072	0.080	
	D-FACTOR	0.793	0.638	0.535	0.518	0.598	0.658	0.697	
	TURNING	51.2	40.0	35.5	34.9	42.1	48.5	55.0	

Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 94)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.018	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2514.1	P-STATIC	9.800	9.800	9.802	9.806	9.811	9.818	9.822	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.101	-2.752	-4.217	-5.800	-7.277	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	74.042	74.000	73.762	73.367	72.754	71.940	71.444	
	VZ-BAR	74.042	74.000	73.762	73.367	72.754	71.940	71.444	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.219	0.218	0.218	0.217	0.215	0.212	0.211	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.068	10.052	10.028	10.075	10.075	10.067	10.062	10.061
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.465	9.475	9.493	9.512	9.532	9.549	9.556	
	BETABAR	28.168	28.782	30.122	30.266	29.259	26.994	24.033	
	EPSILON	-0.000	-1.061	-2.674	-4.135	-5.724	-7.272	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	100.624	98.488	94.907	97.191	95.370	93.127	92.048	
	VZ-BAR	88.707	86.322	82.090	83.944	83.203	82.979	84.069	
	V-THET-BAR	47.500	47.418	47.629	48.985	46.613	42.270	37.487	
	MACH-BAR	0.298	0.292	0.281	0.288	0.282	0.276	0.272	
	INCID-B	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.9	-5.0	-5.0	-6.2	-8.6	-12.2	-15.9	
	OMEGABAR	0.191	0.240	0.313	0.170	0.177	0.206	0.224	
	TURNING	-28.2	-28.8	-30.1	-30.3	-29.3	-27.0	-24.0	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.068	10.052	10.029	10.077	10.075	10.067	10.062	10.061
WCOR= 1.025	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 2514.1	P-STATIC	9.212	9.221	9.238	9.254	9.271	9.284	9.288	
	BETABAR	23.194	23.695	24.755	25.310	24.525	22.611	20.130	
	EPSILON	-1.170	-1.834	-3.780	-5.567	-6.928	-7.102	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	120.508	118.686	115.902	117.939	116.548	115.015	114.460	
	VZ-BAR	110.768	108.681	105.251	106.618	106.033	106.173	107.469	
	V-THET-BAR	47.462	47.695	48.532	50.421	48.378	44.220	39.391	
	MACH-BAR	0.359	0.353	0.345	0.351	0.346	0.342	0.340	
	U-WHEEL	160.349	165.122	174.669	184.215	193.762	203.309	208.083	
	V-BAR-PR	158.155	160.005	164.282	171.087	179.985	191.266	200.016	
	BETABAR-PR	45.543	47.214	50.157	51.488	53.894	56.280	57.500	
	V-THET-R-P	-112.887	-117.426	-126.137	-133.795	-145.384	-159.089	-168.692	
	MACH-BAR-P	0.471	0.476	0.488	0.509	0.535	0.568	0.594	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.469	11.756	11.826	11.786	11.547	11.378	11.286	11.662
ROTOR	T-TOTAL	302.00	301.75	302.41	301.67	302.10	302.20	302.58	302.03
----	P-STATIC	9.500	9.548	9.657	9.760	9.845	9.924	9.962	
PR = 1.1592	BETABAR	49.536	44.873	45.942	45.054	48.024	48.724	49.286	
TR = 1.0481	EPSILON	-2.885	-2.344	-3.520	-5.198	-6.482	-6.720	-6.418	
EFF-A = 0.8980	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
EFF-P = 0.8987	V-BAR	178.295	187.024	184.827	178.314	164.396	152.464	145.889	
	VZ-BAR	115.708	132.541	128.525	125.970	109.958	100.580	95.161	
	V-THET-BAR	135.650	131.943	132.825	126.203	122.208	114.581	110.580	
	MACH-BAR	0.526	0.553	0.546	0.526	0.483	0.446	0.426	
	U-WHEEL	158.465	163.114	172.411	181.709	191.007	200.305	204.953	
	V-BAR-PR	117.936	136.158	134.487	137.671	129.732	132.174	134.023	
	BETABAR-PR	11.155	13.230	17.119	23.783	32.038	40.437	44.762	
	V-THET-R-P	-22.815	-31.170	-39.587	-55.506	-68.799	-85.724	-94.373	
	MACH-BAR-P	0.348	0.403	0.397	0.406	0.381	0.387	0.391	
	D-FACTOR	0.447	0.336	0.375	0.375	0.455	0.473	0.487	
	TURNING	34.4	34.0	33.0	27.7	21.9	15.8	12.7	
	INCID-B	-11.8	-8.9	-5.1	-4.1	-3.0	-2.4	-2.3	
	DEVIATION	23.0	17.0	8.5	6.1	6.8	9.2	10.9	
	OMEGABAR-P	0.235	0.030	0.028	0.023	0.154	0.212	0.254	
	LOSS BAR	0.081	0.011	0.010	0.009	0.055	0.071	0.081	
	P1-RATIO	1.139	1.170	1.179	1.169	1.146	1.130	1.122	1.1592
	EFF-AD	0.791	0.973	0.975	0.976	0.825	0.733	0.668	0.8980
	EFF-POLY	0.794	0.972	0.974	0.975	0.827	0.736	0.672	0.8987
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.469	11.750	11.826	11.792	11.552	11.379	11.286	11.662
	T-TOTAL	302.00	301.75	302.42	301.67	302.09	302.19	302.58	302.03
	P-STATIC	9.516	9.542	9.613	9.703	9.787	9.864	9.902	
	BETABAR	49.937	44.953	45.453	44.383	47.177	47.769	48.222	
	EPSILON	-0.113	-0.996	-2.711	-4.441	-5.716	-7.106	-7.979	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	177.493	187.103	186.864	181.208	167.566	155.830	149.354	
	VZ-BAR	114.241	132.413	131.083	129.508	113.904	104.746	99.506	
	V-THET-BAR	135.842	132.177	133.173	126.783	122.896	115.383	111.378	
	MACH-BAR	0.523	0.553	0.552	0.535	0.492	0.456	0.436	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.180	11.444	11.697	11.673	11.408	11.207	11.083	11.489
ROTOR PLUS STATOR	T-TOTAL	302.00	301.75	302.36	301.68	302.08	302.18	302.58	302.03
----------	P-STATIC	10.455	10.457	10.456	10.446	10.430	10.413	10.403	
PR = 1.1420	BETABAR	15.733	15.397	15.236	14.964	14.994	12.403	8.089	
TR = 1.0481	EPSILON	0.450	0.083	-0.763	-1.990	-3.203	-4.690	-5.489	
EFF-A = 0.8037	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8074	V-BAR	107.263	124.151	138.417	137.578	123.849	112.298	104.407	
	VZ-BAR	103.245	119.696	133.552	132.912	119.632	109.669	103.369	
	V-THET-BAR	29.085	32.960	36.375	35.523	32.043	24.129	14.692	
IGV,ROTOR,STATOR	MACH-BAR	0.311	0.361	0.403	0.401	0.360	0.326	0.302	
----------	EFF-POLY	0.785	0.775	0.889	0.876	0.835	0.780	0.730	
PR = 1.1340	INCID-B	-5.7	-7.7	-5.4	-6.1	-4.3	-5.9	-6.6	
TR = 1.0481	DEVIATION	15.0	14.1	14.3	14.6	15.6	14.4	11.0	
EFF-A = 0.7617	OMEGA-BAR	0.148	0.138	0.058	0.057	0.081	0.114	0.146	
EFF-P = 0.7647	LOSS BAR	0.050	0.048	0.021	0.022	0.033	0.048	0.064	
	D-FACTOR	0.609	0.528	0.458	0.446	0.492	0.538	0.591	
	TURNING	34.2	29.6	30.2	29.4	32.2	35.4	40.1	

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Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 95)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.989	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 2521.9	P-STATIC	9.813	9.814	9.816	9.819	9.824	9.830	9.834	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.101	-2.746	-4.216	-5.788	-7.234	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	72.466	72.429	72.217	71.846	71.280	70.534	70.061	
	VZ-BAR	72.466	72.429	72.217	71.846	71.280	70.534	70.061	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.214	0.214	0.213	0.212	0.210	0.208	0.207	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1418	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.072	10.056	10.035	10.079	10.078	10.070	10.066	10.065
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.496	9.504	9.520	9.539	9.557	9.573	9.582	
	BETABAR	28.190	28.732	30.083	30.266	29.324	26.934	19.538	
	EPSILON	-0.000	-1.057	-2.665	-4.165	-5.718	-7.242	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	98.275	96.295	92.999	95.115	93.354	91.119	89.974	
	VZ-BAR	86.618	84.439	80.472	82.150	81.392	81.225	84.793	
	V-THET-BAR	46.426	46.289	46.616	47.940	45.720	41.272	30.090	
	MACH-BAR	0.291	0.285	0.275	0.282	0.276	0.270	0.266	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.9	-5.0	-5.1	-6.2	-8.6	-12.3	-20.4	
	OMEGABAR	0.188	0.236	0.307	0.166	0.174	0.204	0.221	
	TURNING	-28.2	-28.7	-30.1	-30.3	-29.3	-26.9	-19.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.072	10.056	10.035	10.080	10.078	10.070	10.066	10.065
WCOR= 0.995	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
MCOR= 2521.9	P-STATIC	9.252	9.261	9.276	9.292	9.308	9.320	9.323	
	BETABAR	23.193	23.658	24.763	25.320	24.605	22.541	16.401	
	EPSILON	-1.170	-1.705	-3.446	-5.284	-6.727	-6.951	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	117.787	116.035	113.386	115.372	114.028	112.494	111.978	
	VZ-BAR	108.268	106.283	102.960	104.289	103.674	103.893	107.422	
	V-TPET-BAR	46.389	46.561	47.494	49.341	47.477	43.122	31.618	
	MACH-BAR	0.350	0.345	0.337	0.343	0.339	0.334	0.333	
	U-WHEEL	160.843	165.631	175.207	184.783	194.359	203.936	208.724	
	V-BAR-PR	157.549	159.608	164.048	170.942	179.787	191.456	207.137	
	BETABAR-PR	46.591	48.247	51.124	52.403	54.783	57.133	58.762	
	V-THET-B-P	-114.455	-119.070	-127.713	-135.442	-146.882	-160.813	-177.106	
	MACH-BAR-P	0.469	0.474	0.487	0.508	0.534	0.569	0.615	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.469	11.714	11.905	11.895	11.656	11.558	11.347	11.745
ROTOR	T-TOTAL	302.32	302.42	303.08	302.14	302.84	303.15	303.15	302.72
-----	P-STATIC	9.642	9.697	9.819	9.926	10.014	10.099	10.137	
TR = 1.1670	BETABAR	52.684	48.874	48.481	46.745	51.336	50.728	49.255	
TR = 1.0505	EPSILON	-2.885	-2.281	-3.259	-5.114	-6.366	-6.641	-6.418	
EFF-A = 0.8953	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8957	V-BAR	171.375	178.696	180.584	174.896	160.709	151.728	138.936	
	VZ-BAR	103.890	117.534	119.799	119.849	100.407	96.035	90.684	
	V-THET-BAR	136.295	138.594	135.126	127.375	125.478	117.465	105.261	
	MACH-BAR	0.504	0.527	0.532	0.515	0.471	0.443	0.404	
	U-WHEEL	158.953	163.616	172.983	182.269	191.596	200.922	205.585	
	V-BAR-PR	106.333	121.066	125.629	131.832	120.235	127.253	135.235	
	BETABAR-PR	12.304	13.865	17.519	24.613	33.369	40.980	47.889	
	V-THET-B-P	-22.659	-29.022	-37.817	-54.894	-66.118	-83.457	-100.325	
	MACH-BAR-P	0.313	0.357	0.370	0.388	0.352	0.372	0.394	
	D-FACTOR	0.523	0.438	0.435	0.413	0.513	0.511	0.504	
	TURNING	34.3	34.4	33.6	27.8	21.4	16.2	10.9	
	INCID-M	-10.8	-7.9	-4.1	-3.1	-2.1	-1.5	-1.0	
	DEVIATION	24.2	17.6	8.9	6.9	8.2	9.8	14.0	
	OMEGABAR-P	0.264	0.113	0.038	0.002	0.153	0.191	0.246	
	LOSS PAR	0.090	0.039	0.014	0.001	0.058	0.063	0.074	
	PT-RATIO	1.139	1.165	1.186	1.180	1.157	1.148	1.127	1.1670
	EFF-AD	0.771	0.902	0.967	0.999	0.836	0.774	0.671	0.8953
	EFF-POLY	0.774	0.903	0.967	0.997	0.838	0.777	0.675	0.8957
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.469	11.710	11.903	11.902	11.658	11.561	11.347	11.745
	T-TOTAL	302.32	302.42	303.07	302.12	302.83	303.15	303.15	302.72
	P-STATIC	9.648	9.685	9.776	9.874	9.959	10.042	10.081	
	BETABAR	52.916	48.833	47.922	46.054	50.397	49.820	48.179	
	EPSILON	-0.113	-1.282	-2.722	-3.791	-5.567	-6.931	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	171.090	179.104	182.471	177.607	163.641	154.973	142.265	
	VZ-BAR	103.165	117.902	122.281	123.256	104.317	99.980	94.863	
	V-TPET-BAR	136.487	134.811	135.436	127.875	126.077	118.407	106.020	
	MACH-BAR	0.503	0.528	0.538	0.523	0.480	0.453	0.414	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.252	11.506	11.780	11.767	11.500	11.348	11.154	11.582
ROTOR PLUS STATOR	T-TOTAL	302.32	302.41	303.07	302.16	302.79	303.15	303.15	302.72
----------	P-STATIC	10.630	10.634	10.635	10.627	10.610	10.593	10.581	
PR = 1.1508	BETABAR	16.217	15.989	15.842	15.764	15.782	13.198	9.702	
TR = 1.0505	EPSILON	0.450	-0.022	-1.053	-2.135	-3.245	-4.826	-5.489	
EFF-A = 0.8108	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8145	V-BAR	98.952	116.401	132.394	131.973	117.610	108.954	95.437	
	VZ-BAR	95.014	111.898	127.366	127.009	113.177	106.072	94.072	
	V-THET-BAR	27.636	32.061	36.140	35.855	31.988	24.885	16.083	
IGV,ROTOR,STATOR	MACH-BAR	0.286	0.338	0.385	0.384	0.341	0.315	0.275	
----------	EFF-POLY	0.834	0.843	0.890	0.859	0.825	0.741	0.738	
PR = 1.1432	INCID-M	-2.7	-3.8	-2.9	-4.5	-1.1	-3.8	-6.6	
TR = 1.0505	DEVIATION	15.4	14.7	15.0	15.4	16.4	15.2	12.6	
EFF-A = 0.7737	OMEGA-BAR	0.119	0.100	0.057	0.067	0.093	0.140	0.152	
EFF-P = 0.7761	LOSS PAR	0.041	0.035	0.021	0.026	0.037	0.059	0.066	
	D-FACTOR	0.647	0.558	0.483	0.467	0.524	0.563	0.613	
	TURNING	36.7	32.8	32.1	30.3	34.6	36.6	38.5	

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Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 96)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.950	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2532.8	P-STATIC	9.825	9.825	9.827	9.830	9.835	9.841	9.845	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.095	-2.824	-4.297	-5.857	-7.301	-8.067	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	71.130	71.092	70.874	70.508	69.943	69.199	68.746	
	VZ-BAR	71.130	71.092	70.874	70.508	69.943	69.199	68.746	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.210	0.210	0.209	0.208	0.206	0.204	0.203	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.076	10.062	10.043	10.084	10.082	10.074	10.070	10.070
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.525	9.531	9.546	9.564	9.582	9.597	9.605	
	BETABAR	27.962	28.497	29.799	30.092	29.243	27.393	24.504	
	EPSILON	-0.000	-1.080	-2.727	-4.212	-5.798	-7.304	-8.118	
	K-BAR	0.920	0.920	0.920	0.920	0.919	0.919	0.920	
	V-BAR	96.261	94.391	91.262	93.188	91.431	89.254	88.154	
	VZ-BAR	85.024	82.955	79.195	80.629	79.778	79.244	80.214	
	V-THET-BAR	45.135	45.035	45.353	46.723	44.666	41.065	36.562	
	MACH-BAR	0.285	0.279	0.270	0.276	0.271	0.264	0.261	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-5.1	-5.3	-5.3	-6.4	-8.6	-11.8	-15.4	
	OMEGABAR	0.186	0.226	0.292	0.159	0.167	0.198	0.215	
	TURNING	-28.0	-28.5	-29.8	-30.1	-29.2	-27.4	-24.5	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.076	10.062	10.043	10.084	10.082	10.074	10.070	10.070
WCOR= 0.956	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2532.8	P-STATIC	9.269	9.298	9.312	9.327	9.343	9.355	9.358	
	BETABAR	23.022	23.487	24.552	25.186	24.542	22.973	20.539	
	EPSILON	-1.170	-1.647	-3.531	-5.643	-7.263	-7.378	-6.637	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	115.316	113.664	111.187	113.010	111.622	110.073	109.506	
	VZ-BAR	106.132	104.248	101.134	102.267	101.538	101.342	102.545	
	V-THET-BAR	45.099	45.299	46.201	48.092	46.363	42.980	38.419	
	MACH-BAR	0.343	0.338	0.330	0.336	0.332	0.327	0.325	
	U-WHEEL	161.538	166.346	175.984	185.581	195.199	204.816	209.625	
	V-BAR-PR	157.590	159.753	164.520	171.354	180.174	190.966	199.567	
	BETABAR-PR	47.651	49.264	52.067	53.356	55.696	57.947	59.060	
	V-THET-B-P	-116.439	-121.047	-129.763	-137.490	-148.836	-161.856	-171.206	
	MACH-BAR-P	0.468	0.475	0.489	0.509	0.535	0.567	0.592	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1296	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.469	11.757	12.014	11.970	11.716	11.594	11.443	11.820
ROTOR	T-TOTAL	302.83	303.00	303.69	302.74	303.42	303.69	303.87	303.32
-----	P-STATIC	9.740	9.798	9.926	10.040	10.132	10.218	10.259	
PR = 1.1738	BETABAR	55.861	50.926	49.610	48.443	53.623	55.465	57.758	
TR = 1.0526	EPSILON	-2.885	-2.252	-3.424	-5.300	-6.734	-6.872	-6.418	
EFF-A = 0.8930	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8935	V-BAR	166.574	175.761	179.472	172.623	157.380	147.082	136.407	
	VZ-BAR	93.481	110.769	116.619	114.514	93.346	83.392	72.774	
	V-THET-BAR	137.870	136.431	137.077	129.168	126.694	121.153	115.373	
	MACH-BAR	0.489	0.517	0.529	0.507	0.466	0.428	0.396	
	U-WHEEL	159.640	164.323	173.689	183.056	192.423	201.790	206.475	
	V-BAR-PR	95.985	114.247	122.232	126.578	114.193	116.047	116.599	
	BETABAR-PR	13.109	14.125	17.430	25.206	35.163	44.031	51.381	
	V-THET-B-P	-21.770	-27.692	-36.613	-53.688	-69.729	-80.636	-91.100	
	MACH-BAR-P	0.282	0.336	0.359	0.372	0.334	0.338	0.339	
	D-FACTOR	0.595	0.488	0.465	0.453	0.556	0.575	0.586	
	TURNING	34.5	35.1	34.6	28.2	20.5	13.9	7.7	
	INCID-M	-9.7	-6.9	-3.2	-2.2	-1.2	-0.7	-0.7	
	DEVIATION	25.0	17.9	8.8	7.5	10.0	12.8	17.5	
	OMEGABAR-P	0.309	0.137	0.029	0.008	0.101	0.219	0.267	
	LOSS PAR	0.105	0.048	0.011	0.003	0.055	0.069	0.075	
	PT-RATIO	1.136	1.168	1.196	1.187	1.162	1.151	1.135	1.1738
	EFF-AD	0.741	0.885	0.975	0.992	0.831	0.752	0.679	0.8930
	EFF-POLY	0.745	0.886	0.975	0.991	0.833	0.756	0.684	0.8935
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.469	11.751	12.011	11.977	11.721	11.596	11.443	11.820
	T-TOTAL	302.83	302.99	303.68	302.74	303.40	303.69	303.87	303.32
	P-STATIC	9.751	9.793	9.890	9.993	10.081	10.165	10.205	
	BETABAR	56.268	51.054	49.188	47.811	52.596	54.363	56.320	
	EPSILON	-0.113	-0.979	-2.680	-4.570	-5.631	-7.195	-7.979	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	166.014	175.710	181.510	175.103	160.273	150.139	139.646	
	VZ-BAR	92.169	110.456	118.632	117.599	97.363	87.485	77.442	
	V-THET-BAR	138.065	136.627	137.376	129.735	127.297	122.015	116.206	
	MACH-BAR	0.487	0.517	0.534	0.515	0.469	0.438	0.406	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.360	11.578	11.869	11.868	11.583	11.382	11.209	11.665
ROTOR PLUS STATOR	T-TOTAL	302.63	302.97	303.67	302.75	303.33	303.89	303.87	303.32
----------	P-STATIC	10.778	10.762	10.785	10.777	10.761	10.744	10.734	
PR = 1.1562	BETABAR	15.944	16.369	16.572	16.745	15.910	12.003	6.211	
TR = 1.0526	EPSILON	0.456	-0.045	-0.901	-1.931	-3.013	-4.576	-5.489	
EFF-A = 0.8152	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8191	V-BAR	90.355	110.668	126.318	128.558	112.617	99.832	86.561	
	VZ-BAR	86.879	106.179	122.987	123.107	108.301	97.637	85.693	
	V-THET-BAR	24.620	31.196	36.599	37.039	30.876	20.765	12.365	
IGV,ROTOR,STATOR	MACH-BAR	0.261	0.320	0.372	0.374	0.326	0.288	0.249	
----------	EFF-POLY	0.869	0.867	0.879	0.889	0.855	0.747	0.717	
PR = 1.1512	INCID-M	0.6	-1.6	-1.6	-2.7	1.1	0.7	1.5	
TR = 1.0526	DEVIATION	15.2	15.1	15.7	16.4	16.5	14.0	11.2	
EFF-A = 0.7826	OMEGA-BAR	0.098	0.088	0.067	0.055	0.084	0.150	0.183	
EFF-P = 0.7850	LOSS PAR	0.034	0.031	0.024	0.021	0.033	0.063	0.080	
	D-FACTOR	0.697	0.587	0.505	0.482	0.553	0.633	0.713	
	TURNING	40.3	34.7	32.6	31.1	36.7	42.4	48.1	

Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 97)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.885	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2518.8	P-STATIC	9.872	9.873	9.874	9.877	9.881	9.886	9.889	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.095	-2.793	-4.287	-5.857	-7.309	-8.067	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	65.357	65.321	65.128	64.796	64.280	63.602	63.184	
	VZ-BAR	65.357	65.321	65.128	64.796	64.280	63.602	63.184	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.193	0.193	0.192	0.191	0.190	0.188	0.186	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.083	10.072	10.055	10.090	10.088	10.081	10.077	10.078
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.614	9.621	9.634	9.650	9.664	9.678	9.684	
	BETABAR	28.295	28.559	29.728	29.810	28.954	26.883	24.211	
	EPSILON	-0.000	-1.057	-2.693	-4.190	-5.782	-7.296	-8.118	
	K-BAR	0.925	0.925	0.925	0.925	0.924	0.924	0.925	
	V-BAR	88.460	86.731	83.831	85.685	84.026	81.942	80.896	
	VZ-BAR	77.891	76.178	72.797	74.347	73.523	73.085	73.780	
	V-THET-BAR	41.931	41.463	41.571	42.595	40.678	37.053	33.175	
	MACH-BAR	0.262	0.256	0.248	0.253	0.248	0.242	0.239	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.8	-5.2	-5.4	-6.7	-8.9	-12.4	-15.7	
	OMEGABAR	0.186	0.231	0.298	0.161	0.172	0.206	0.226	
	TURNING	-28.3	-28.6	-29.7	-29.8	-29.0	-26.9	-24.2	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.083	10.072	10.055	10.091	10.088	10.081	10.077	10.078
WCOR= 0.890	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2518.8	P-STATIC	9.418	9.425	9.436	9.449	9.464	9.475	9.477	
	BETABAR	23.356	23.578	24.532	24.995	24.358	22.609	20.340	
	EPSILON	-1.170	-1.531	-3.707	-6.114	-7.999	-7.933	-6.637	
	K-BAR	0.925	0.925	0.925	0.925	0.925	0.925	0.925	
	V-BAR	105.772	104.265	102.015	103.765	102.367	100.828	100.289	
	VZ-BAR	97.120	95.561	92.805	94.047	93.254	93.078	94.035	
	V-THET-BAR	41.698	41.705	42.356	43.844	42.220	38.762	34.860	
	MACH-BAR	0.314	0.309	0.302	0.308	0.303	0.299	0.297	
	U-WHEEL	160.649	165.431	174.996	184.561	194.125	203.690	208.473	
	V-BAR-PR	153.409	156.337	161.884	169.252	178.248	189.381	197.443	
	BETABAR-PR	50.722	52.318	55.019	56.242	58.453	60.560	61.556	
	V-THET-B-P	-118.752	-123.727	-132.640	-140.717	-151.906	-164.928	-173.612	
	MACH-BAR-P	0.455	0.464	0.480	0.502	0.528	0.561	0.585	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.469	11.829	12.155	12.057	11.755	11.636	11.580	11.911
ROTOR	T-TOTAL	303.73	303.76	304.46	303.62	304.13	304.95	305.46	304.14
-----	P-STATIC	9.888	9.951	10.090	10.207	10.298	10.383	10.425	
PR = 1.1819	BETABAR	62.222	53.577	50.958	50.666	57.134	60.975	62.888	
TR = 1.0556	EPSILON	-2.885	-1.899	-3.387	-5.706	-7.163	-7.033	-6.416	
EFF-A = 0.8840	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8847	V-BAR	159.132	171.470	178.019	168.376	150.576	140.098	134.721	
	VZ-BAR	74.163	101.826	112.132	106.726	81.717	67.983	61.396	
	V-THET-BAR	140.794	137.917	138.264	130.230	126.469	122.492	119.917	
	MACH-BAR	0.465	0.503	0.523	0.494	0.439	0.407	0.390	
	U-WHEEL	158.762	163.419	172.734	182.050	191.365	200.680	205.338	
	V-BAR-PR	76.308	104.971	117.315	118.652	104.364	103.650	105.196	
	BETABAR-PR	13.619	14.052	17.086	25.400	38.458	48.986	54.293	
	V-THET-B-P	-17.968	-25.502	-34.470	-51.819	-64.696	-78.188	-85.420	
	MACH-BAR-P	0.223	0.308	0.344	0.348	0.304	0.301	0.305	
	D-FACTOR	0.726	0.547	0.499	0.507	0.618	0.650	0.658	
	TURNING	37.1	38.3	37.9	30.3	20.0	11.6	7.3	
	INCID-M	-6.7	-3.8	-0.3	0.7	1.6	1.9	1.8	
	DEVIATION	25.5	17.8	8.5	8.2	13.3	17.8	20.4	
	OMEGABAR-P	0.404	0.170	0.021	0.030	0.191	0.266	0.301	
	LOSS PAR	0.137	0.059	0.008	0.011	0.063	0.077	0.079	
	PT-RATIO	1.137	1.174	1.208	1.195	1.166	1.154	1.149	1.1819
	EFF-AD	0.695	0.870	0.984	0.973	0.809	0.720	0.676	0.8840
	EFF-POLY	0.699	0.872	0.984	0.972	0.812	0.725	0.682	0.8847
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.469	11.821	12.153	12.066	11.761	11.638	11.580	11.911
	T-TOTAL	303.73	303.75	304.48	303.64	304.11	304.94	305.46	304.14
	P-STATIC	9.896	9.951	10.062	10.172	10.257	10.335	10.377	
	BETABAR	62.697	53.859	50.692	50.175	56.148	59.656	61.371	
	EPSILON	-0.113	-1.323	-2.986	-4.428	-5.656	-7.109	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	158.670	171.134	179.246	170.438	153.051	142.891	137.606	
	VZ-BAR	72.783	100.950	113.551	109.159	85.260	72.196	65.931	
	V-THET-BAR	140.993	138.133	138.691	130.894	127.100	123.307	120.783	
	MACH-BAR	0.464	0.502	0.526	0.500	0.446	0.415	0.399	
STATOR TRAILING-EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.324	11.673	11.937	11.881	11.589	11.464	11.387	11.716
ROTOR PLUS STATOR	T-TOTAL	303.73	303.74	304.44	303.70	303.98	304.84	305.46	304.14
----------	P-STATIC	10.931	10.936	10.938	10.930	10.917	10.905	10.897	
PR = 1.1625	BETABAR	18.110	17.523	17.330	16.823	15.988	12.910	8.228	
TR = 1.0554	EPSILON	0.450	-0.174	-0.896	-1.629	-2.470	-4.116	-5.489	
EFF-A = 0.7930	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.7974	V-BAR	78.211	105.986	122.800	119.833	101.636	93.202	87.540	
	VZ-BAR	74.336	101.070	117.226	114.705	97.704	90.837	86.639	
	V-THET-BAR	24.311	31.904	36.578	34.683	27.997	20.832	12.527	
IGV,ROTOR,STATOR	MACH-BAR	0.225	0.306	0.355	0.347	0.293	0.268	0.251	
----------	EFF-POLY	0.885	0.882	0.825	0.815	0.823	0.792	0.744	
PR = 1.1564	INCID-M	7.0	1.2	-0.1	-0.3	4.6	6.0	6.6	
TR = 1.0554	DEVIATION	17.3	16.2	16.4	16.5	16.6	14.9	11.2	
EFF-A = 0.7665	OMEGA-BAR	0.092	0.079	0.103	0.098	0.115	0.133	0.160	
EFF-P = 0.7693	LOSS PAR	0.031	0.027	0.038	0.037	0.046	0.056	0.070	
	D-FACTOR	0.768	0.606	0.532	0.530	0.614	0.665	0.716	
	TURNING	44.6	36.3	33.4	33.4	40.2	46.7	53.1	

Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 98)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.866	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2518.2	P-STATIC	9.889	9.889	9.891	9.893	9.897	9.902	9.905	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.138	-2.815	-4.294	-5.877	-7.315	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	63.227	63.189	62.983	62.633	62.097	61.401	60.985	
	VZ-BAR	63.227	63.189	62.983	62.633	62.097	61.401	60.985	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.186	0.186	0.186	0.185	0.183	0.181	0.180	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.085	10.074	10.058	10.092	10.090	10.083	10.079	10.080
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.662	9.669	9.681	9.694	9.708	9.720	9.725	
	BETABAR	26.588	27.811	29.660	29.791	28.931	26.886	24.154	
	EPSILON	-0.000	-1.096	-2.727	-4.209	-5.803	-7.308	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	83.905	82.213	79.295	81.344	79.752	77.710	76.717	
	VZ-BAR	75.032	72.717	68.905	70.594	69.799	69.309	70.000	
	V-THET-BAR	37.553	38.356	39.239	40.415	38.580	35.142	31.391	
	MACH-BAR	0.248	0.243	0.234	0.240	0.236	0.230	0.227	
	INCID-R	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-6.5	-6.0	-5.5	-6.7	-8.9	-12.4	-15.8	
	OMEGABAR	0.191	0.236	0.304	0.164	0.175	0.212	0.233	
	TURNING	-26.6	-27.8	-29.7	-29.8	-28.9	-26.9	-24.2	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.085	10.074	10.058	10.093	10.090	10.083	10.079	10.080
WCOR= 0.871	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2518.2	P-STATIC	9.485	9.492	9.502	9.514	9.528	9.538	9.540	
	BETABAR	21.973	22.980	24.453	25.011	24.382	22.656	20.337	
	EPSILON	-1.170	-1.691	-3.814	-6.205	-8.227	-8.018	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	100.284	98.822	96.592	98.395	96.998	95.445	94.911	
	VZ-BAR	92.999	90.980	87.928	89.168	88.346	88.079	88.995	
	V-THET-BAR	37.523	38.579	39.984	41.601	40.043	36.765	32.986	
	MACH-BAR	0.297	0.293	0.286	0.292	0.287	0.283	0.281	
	U-WHEEL	160.609	165.390	174.952	184.515	194.077	203.639	208.421	
	V-BAR-R	154.269	156.074	161.084	168.451	177.573	188.693	196.717	
	BETABAR-R	52.927	54.342	56.916	58.038	60.162	62.173	63.104	
	V-THET-B-R	-123.086	-126.811	-134.968	-142.914	-154.034	-166.874	-175.435	
	MACH-BAR-R	0.457	0.462	0.477	0.499	0.526	0.559	0.582	
ROTOR TRAILING EDGE	DIABETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.590	11.901	12.183	12.111	11.760	11.630	11.629	11.944
ROTOR	T-TOTAL	303.99	304.26	304.78	303.79	304.28	305.27	305.98	304.43
-----	P-STATIC	9.981	10.042	10.176	10.289	10.376	10.460	10.501	
PR = 1.1849	BETABAR	59.756	58.152	51.872	50.655	58.572	64.482	65.183	
TR = 1.0564	EPSILON	-2.885	-2.079	-3.406	-5.768	-7.306	-7.046	-6.418	
EFF-A = 0.8826	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
EFF-P = 0.8832	V-BAR	159.790	170.162	175.220	166.646	146.577	135.279	132.869	
	VZ-BAR	80.464	99.663	108.183	105.653	76.442	58.285	55.768	
	V-THET-BAR	138.041	137.905	137.834	128.874	125.046	122.072	120.599	
	MACH-BAR	0.467	0.499	0.574	0.488	0.427	0.392	0.384	
	U-WHEEL	158.722	163.378	172.691	182.004	191.317	200.630	205.286	
	V-BAR-R	83.090	102.867	113.667	118.265	101.211	97.851	101.401	
	BETABAR-R	14.411	14.335	17.856	26.697	40.943	53.417	56.635	
	V-THET-B-R	-20.681	-25.474	-34.858	-53.131	-66.271	-78.558	-84.688	
	MACH-BAR-R	0.243	0.301	0.333	0.346	0.295	0.284	0.293	
	D-FACTOR	0.687	0.568	0.524	0.570	0.636	0.683	0.682	
	TURNING	38.5	40.0	39.1	31.3	19.2	8.8	6.5	
	INCID-R	-4.5	-1.8	1.6	2.5	3.3	3.5	3.3	
	DEVIATION	26.3	18.1	9.3	9.0	15.8	22.2	22.8	
	OMEGABAR-R	0.349	0.169	0.033	0.016	0.199	0.289	0.312	
	LOSS PAR	0.118	0.059	0.012	0.006	0.064	0.076	0.077	
	PT-RATIO	1.149	1.181	1.211	1.200	1.166	1.154	1.154	1.1849
	PFF-AD	0.739	0.874	0.975	0.986	0.803	0.703	0.676	0.8826
	EFF-POLY	0.743	0.876	0.975	0.985	0.806	0.708	0.681	0.8832
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.590	11.894	12.181	12.119	11.768	11.630	11.629	11.944
	T-TOTAL	303.99	304.25	304.81	303.81	304.25	305.25	305.98	304.43
	P-STATIC	9.990	10.039	10.152	10.267	10.346	10.423	10.464	
	BETABAR	60.179	54.325	51.690	50.316	57.730	63.358	64.037	
	EPSILON	-0.113	-1.333	-3.097	-4.338	-5.386	-6.961	-7.979	
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	159.335	170.024	176.261	168.371	148.622	137.459	135.104	
	VZ-BAR	79.236	99.168	109.268	107.517	79.356	61.644	59.148	
	V-THET-BAR	138.236	138.084	138.305	129.572	125.654	122.857	121.469	
	MACH-BAR	0.466	0.498	0.517	0.493	0.433	0.399	0.391	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.419	11.709	11.953	11.908	11.601	11.470	11.418	11.735
ROTOR PLUS STATOR	T-TOTAL	303.99	304.23	304.80	303.90	304.09	305.10	305.98	304.43
----------	P-STATIC	10.922	10.924	10.923	10.916	10.908	10.898	10.892	
PR = 1.1641	BETABAR	17.407	17.331	17.158	16.935	16.044	12.926	8.486	
TR = 1.0564	EPSILON	0.450	-0.051	-0.824	-1.532	-2.187	-4.044	-5.489	
EFF-A = 0.7864	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.7910	V-BAR	87.853	109.474	124.756	122.357	103.240	94.296	90.679	
	VZ-BAR	83.830	104.504	119.204	117.051	99.218	91.900	89.685	
	V-THET-BAR	26.282	32.611	36.803	35.641	28.536	21.098	13.384	
IGV,ROTOR,STATOR	MACH-BAR	0.253	0.316	0.361	0.354	0.298	0.271	0.260	
----------	EFF-POLY	0.856	0.844	0.795	0.767	0.808	0.784	0.685	
PR = 1.1582	INCID-R	4.5	1.7	0.9	-0.2	6.2	9.7	9.3	
TR = 1.0564	DEVIATION	16.6	16.0	16.3	16.6	16.7	14.9	11.4	
EFF-A = 0.7617	OMEGA-BAR	0.107	0.100	0.112	0.114	0.117	0.133	0.181	
EFF-P = 0.7646	LOSS PAR	0.036	0.035	0.041	0.043	0.047	0.056	0.079	
	D-FACTOR	0.698	0.581	0.512	0.505	0.590	0.640	0.687	
	TURNING	42.8	37.0	34.5	33.4	41.7	50.4	55.5	

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Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 99)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.859	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2522.1	P-STATIC	9.893	9.894	9.895	9.897	9.901	9.906	9.909	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.095	-2.762	-4.266	-5.857	-7.300	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	62.618	62.582	62.400	62.083	61.587	60.937	60.536	
	VZ-BAR	62.618	62.582	62.400	62.083	61.587	60.937	60.538	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.185	0.184	0.184	0.183	0.182	0.180	0.178	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.086	10.075	10.059	10.093	10.091	10.083	10.079	10.081
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.671	9.677	9.688	9.702	9.715	9.727	9.732	
	BETABAR	28.445	28.430	29.432	29.778	28.668	26.691	23.907	
	EPSILON	-0.000	-1.057	-2.687	-4.177	-5.782	-7.296	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	83.127	81.447	78.628	80.602	79.004	76.971	75.954	
	VZ-BAR	73.092	71.624	68.480	69.960	69.318	68.767	69.438	
	V-THET-BAR	39.594	38.776	38.637	40.030	37.901	34.575	30.780	
	MACH-BAR	0.246	0.241	0.232	0.238	0.233	0.227	0.224	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.6	-5.3	-5.7	-6.7	-9.2	-12.5	-16.0	
	OMEGABAR	0.142	0.237	0.306	0.165	0.176	0.213	0.233	
	TURNING	-26.4	-26.4	-29.4	-29.8	-28.7	-26.7	-23.4	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.086	10.075	10.059	10.093	10.091	10.083	10.079	10.081
WCOR= 0.863	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2522.1	P-STATIC	9.497	9.503	9.513	9.525	9.538	9.549	9.551	
	BETABAR	23.466	23.476	24.297	24.996	24.153	22.489	20.113	
	EPSILON	-1.170	-1.720	-4.010	-6.577	-8.881	-8.821	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	99.352	97.903	95.711	97.534	96.129	94.551	94.054	
	VZ-BAR	91.135	89.799	87.233	88.399	87.713	87.359	88.323	
	V-THET-BAR	39.563	39.000	39.381	41.213	39.334	36.167	32.344	
	MACH-BAR	0.294	0.290	0.283	0.289	0.285	0.280	0.278	
	U-WHEEL	160.856	165.645	175.222	184.799	194.376	203.953	208.741	
	V-BAR-PR	151.716	155.253	161.439	168.617	178.135	189.167	197.274	
	BETABAR-PR	53.080	54.659	57.291	58.380	60.500	62.495	63.405	
	V-THET-B-P	-121.494	-126.644	-135.840	-143.586	-155.041	-167.786	-176.398	
	MACH-BAR-P	0.450	0.460	0.478	0.499	0.528	0.560	0.584	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	11.623	11.940	12.199	12.155	11.784	11.620	11.640	11.980
ROTOR	T-TOTAL	304.02	304.27	304.79	303.87	304.33	305.28	306.18	304.45
-----	P-STATIC	10.025	10.086	10.218	10.331	10.415	10.498	10.540	
PR = 1.1884	BETABAR	61.778	54.640	52.179	50.624	58.766	66.167	67.007	
TR = 1.0565	EPSILON	-2.885	-1.923	-3.442	-5.945	-7.666	-7.273	-6.418	
EFF-A = 0.8966	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.8970	V-BAR	159.035	169.617	173.861	166.481	145.553	132.410	131.193	
	VZ-BAR	75.207	98.167	106.809	105.622	75.505	53.513	51.246	
	V-THET-BAR	140.129	138.298	137.336	128.681	124.394	121.102	120.771	
	MACH-BAR	0.465	0.497	0.509	0.488	0.424	0.383	0.379	
	U-WHEEL	158.967	163.636	172.957	182.284	191.611	200.939	205.602	
	V-BAR-PR	77.530	101.384	112.410	118.465	101.169	96.151	99.108	
	BETABAR-PR	14.062	14.463	18.470	26.917	41.723	56.162	58.864	
	V-THET-B-P	-18.838	-25.331	-35.619	-53.603	-67.218	-79.836	-84.631	
	MACH-BAR-P	0.227	0.297	0.329	0.347	0.294	0.278	0.287	
	D-FACTOR	0.719	0.575	0.533	0.513	0.640	0.694	0.696	
	TURNING	39.0	40.2	38.8	31.5	18.8	6.3	4.5	
	INCID-M	-4.3	-1.5	2.0	2.8	3.6	3.9	3.6	
	DEVIATION	25.9	18.2	9.9	9.2	16.5	24.9	25.0	
	OMEGABAR-P	0.342	0.149	0.026	-0.001	0.188	0.290	0.316	
	LOSS PAR	0.116	0.052	0.009	-0.000	0.060	0.071	0.073	
	P1-RATIO	1.152	1.185	1.212	1.204	1.168	1.153	1.155	1.1884
	EFF-AU	0.753	0.891	0.980	1.001	0.811	0.698	0.673	0.8966
	EFF-POLY	0.757	0.892	0.980	1.000	0.814	0.703	0.679	0.8970
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	11.623	11.931	12.196	12.171	11.798	11.621	11.640	11.980
	T-TOTAL	304.02	304.26	304.82	303.87	304.30	305.26	306.18	304.45
	P-STATIC	10.010	10.071	10.193	10.307	10.373	10.448	10.480	
	BETABAR	61.461	54.578	51.957	50.201	57.337	63.633	64.440	
	EPSILON	-2.113	-1.275	-3.215	-4.399	-5.367	-6.942	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	159.736	170.000	174.929	168.272	148.537	136.016	134.839	
	VZ-BAR	76.314	98.540	107.799	107.712	80.191	60.416	58.177	
	V-THET-BAR	140.327	138.498	137.765	129.279	124.993	121.852	121.643	
	MACH-BAR	0.467	0.498	0.513	0.493	0.433	0.394	0.390	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.419	11.707	11.943	11.908	11.607	11.463	11.428	11.734
ROTOR PLUS STATOR	T-TOTAL	304.02	304.25	304.82	304.01	304.12	304.99	306.18	304.45
----------	P-STATIC	10.949	10.953	10.955	10.947	10.935	10.925	10.919	
PR = 1.1640	BETABAR	16.151	16.558	16.850	16.719	15.889	13.298	9.615	
TR = 1.0565	EPSILON	0.450	-0.085	-0.704	-1.280	-1.716	-3.521	-5.489	
EFF-A = 0.7848	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.7894	V-BAR	85.445	107.219	122.192	120.399	101.565	91.459	89.196	
	VZ-BAR	82.673	102.771	116.946	115.309	97.683	89.001	87.943	
	V-THET-BAR	23.768	30.563	35.419	34.638	27.810	21.041	14.898	
IGV,ROTOR,STATOR	MACH-BAR	0.246	0.310	0.353	0.349	0.293	0.263	0.256	
----------	EFF-POLY	0.834	0.816	0.773	0.718	0.786	0.808	0.689	
PR = 1.1582	INCID-M	5.8	1.9	1.1	-0.3	5.8	10.0	9.7	
TR = 1.0565	DEVIATION	15.4	15.2	16.0	16.4	16.5	15.3	12.6	
EFF-A = 0.7662	OMEGA-BAR	0.126	0.121	0.126	0.141	0.134	0.134	0.183	
EFF-P = 0.7635	LOSS PAR	0.043	0.042	0.046	0.054	0.053	0.056	0.060	
	D-FACTOR	0.724	0.599	0.525	0.519	0.604	0.655	0.693	
	TURNING	45.3	38.0	35.1	33.5	41.4	50.3	54.8	

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Table B-6. Scaled Stage with IGV-20 Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 100)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 0.792	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2531.4	P-STATIC	9.934	9.934	9.935	9.937	9.940	9.945	9.947	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.135	-2.795	-4.263	-5.886	-7.335	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	57.048	57.014	56.829	56.519	56.038	55.408	55.034	
	VZ-BAR	57.048	57.014	56.829	56.519	56.038	55.408	55.034	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.168	0.168	0.167	0.167	0.165	0.163	0.162	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.092	10.083	10.069	10.099	10.098	10.090	10.086	10.088
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.757	9.762	9.773	9.784	9.795	9.805	9.809	
	BETABAR	27.779	28.770	30.619	30.383	29.442	27.591	24.855	
	EPSILON	-0.000	-1.097	-2.710	-4.176	-5.805	-7.320	-8.118	
	K-BAR	0.980	0.980	0.980	0.980	0.979	0.979	0.980	
	V-BAR	74.507	72.937	70.124	72.223	70.728	68.698	67.641	
	VZ-BAR	65.921	63.934	60.346	62.305	61.594	60.884	61.376	
	V-THET-BAR	34.725	35.103	35.716	36.529	34.767	31.819	28.431	
	MACH-BAR	0.220	0.215	0.207	0.213	0.209	0.203	0.200	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-5.3	-5.0	-4.5	-6.1	-8.4	-11.6	-15.1	
	OMEGABAR	0.201	0.246	0.318	0.166	0.178	0.221	0.249	
	TURNING	-27.6	-28.6	-30.6	-30.4	-29.4	-27.6	-24.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.092	10.083	10.069	10.099	10.097	10.090	10.086	10.088
WCOR= 0.795	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2531.4	P-STATIC	9.621	9.626	9.636	9.646	9.657	9.666	9.667	
	BETABAR	23.051	23.865	25.338	25.642	24.924	23.330	20.955	
	EPSILON	-1.170	-2.227	-4.694	-7.076	-9.052	-9.464	-6.637	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	88.617	87.284	85.070	86.897	85.626	84.060	83.535	
	VZ-BAR	81.542	79.821	76.886	78.339	77.651	77.186	78.010	
	V-THET-BAR	34.696	35.312	36.406	37.604	36.085	33.289	29.875	
	MACH-BAR	0.262	0.258	0.252	0.257	0.253	0.248	0.247	
	U-WHEEL	161.451	166.257	175.869	185.481	195.094	204.706	209.513	
	V-BAR-PR	150.717	153.358	159.254	167.347	176.958	187.994	195.845	
	BETABAR-PR	57.246	58.633	61.131	62.086	63.970	65.758	66.526	
	V-THET-B-P	-126.753	-130.945	-139.463	-147.877	-159.009	-171.417	-179.636	
	MACH-BAR-P	0.446	0.454	0.471	0.495	0.523	0.556	0.579	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.035	12.103	12.172	12.114	11.983	11.696	11.853	12.072
ROTOR	T-TOTAL	305.43	305.30	305.59	305.41	306.43	308.12	309.47	305.96
———	P-STATIC	10.137	10.200	10.324	10.432	10.527	10.623	10.672	
PR = 1.1967	BETABAR	57.021	55.392	55.767	56.260	61.822	70.063	81.380	
TR = 1.0617	EPSILON	-2.885	-2.389	-3.789	-5.703	-7.172	-7.123	-6.416	
EFF-A = 0.8574	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.8564	V-BAR	171.362	171.070	167.995	160.196	149.566	140.355	135.525	
	VZ-BAR	93.278	97.159	94.507	88.981	70.633	47.865	20.312	
	V-THET-BAR	143.750	140.801	138.890	138.207	131.823	131.840	133.995	
	MACH-BAR	0.501	0.500	0.491	0.467	0.434	0.405	0.390	
	U-WHEEL	159.554	164.234	173.596	182.958	192.320	201.681	206.362	
	V-BAR-PR	94.608	99.950	100.684	101.963	93.026	84.812	75.164	
	BETABAR-PR	9.616	13.558	20.165	29.215	45.595	58.662	74.322	
	V-THET-B-P	-15.804	-23.434	-34.706	-49.750	-60.497	-69.841	-72.367	
	MACH-BAR-P	0.277	0.292	0.294	0.297	0.270	0.245	0.216	
	D-FACTOR	0.623	0.594	0.613	0.626	0.787	0.784	0.852	
	TURNING	47.6	45.1	41.0	32.9	23.4	10.1	-7.6	
	INCID-M	-0.1	2.5	5.9	6.5	7.1	7.1	6.7	
	DEVIATION	21.5	17.3	11.6	11.5	15.4	24.4	40.5	
	OMEGABAR-P	0.211	0.143	0.112	0.130	0.232	0.336	0.412	
	LOSS PAR	0.073	0.050	0.040	0.046	0.075	0.084	0.050	
	PT-RATIO	1.193	1.201	1.208	1.199	1.187	1.179	1.175	1.1967
	EFF-AD	0.862	0.903	0.918	0.892	0.796	0.697	0.639	0.8574
	EFF-POLY	0.865	0.905	0.919	0.893	0.796	0.703	0.647	0.8564
STATOR LEADING EDGE	DIAMETER	0.1256	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.035	12.101	12.171	12.121	11.990	11.900	11.853	12.072
	T-TOTAL	305.43	305.30	305.58	305.39	306.35	308.02	309.47	305.96
	P-STATIC	10.132	10.181	10.299	10.415	10.510	10.604	10.654	
	BETABAR	57.015	55.137	55.367	55.958	61.264	69.201	81.033	
	EPSILON	-0.113	-1.059	-2.880	-4.098	-5.080	-6.770	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	171.616	171.862	169.140	161.309	150.814	141.597	136.632	
	VZ-BAR	93.432	98.238	96.126	90.303	72.517	50.286	21.297	
	V-THET-BAR	143.953	141.017	139.169	138.661	132.217	132.345	134.962	
	MACH-BAR	0.502	0.503	0.494	0.470	0.438	0.409	0.393	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	11.681	11.686	11.978	11.858	11.762	11.733	11.509	11.859
ROTOR PLUS STATOR	T-TOTAL	305.43	305.30	305.56	305.38	305.88	307.42	309.47	305.96
———	P-STATIC	11.136	11.136	11.139	11.136	11.132	11.125	11.122	
PR = 1.1735	BETABAR	16.000	16.511	16.860	16.817	15.937	13.308	9.912	
TR = 1.0617	EPSILON	0.456	0.378	-0.115	-0.589	-1.013	-2.879	-5.489	
EFF-A = 0.7577	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
EFF-P = 0.7632	V-BAR	91.203	106.340	112.236	104.433	97.896	96.462	77.765	
	VZ-BAR	87.670	101.954	107.412	99.967	94.133	93.866	76.605	
	V-THET-BAR	25.139	30.226	32.552	30.214	26.880	22.215	13.386	
IGV,ROTOR,STATOR	MACH-BAR	0.262	0.306	0.324	0.301	0.281	0.277	0.222	
———	EFF-POLY	0.759	0.833	0.831	0.752	0.805	0.867	0.592	
PR = 1.1685	INCID-M	1.4	2.5	4.5	5.4	9.8	15.6	26.3	
TR = 1.0617	DEVIATION	15.2	15.2	16.0	16.5	16.6	15.3	12.9	
EFF-A = 0.7414	OMEGA-BAR	0.186	0.111	0.104	0.154	0.154	0.129	0.267	
EFF-P = 0.7428	LOSS PAR	0.063	0.039	0.038	0.058	0.061	0.054	0.125	
	D-FACTOR	0.714	0.615	0.578	0.616	0.648	0.660	0.829	
	TURNING	41.6	38.6	38.5	39.1	45.3	55.9	71.1	

Table B-7. Nominal Scaled Stage with Decreased Clearance Blade Element Performance — SI (Metric) Units

(Data Point No. 101)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
NCOR= 1.034	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2525.0	P-STATIC	9.789	9.790	9.791	9.795	9.800	9.807	9.811	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.603	-4.207	-5.770	-7.284	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	75.181	75.154	74.965	74.583	73.997	73.214	72.731	
	VZ-BAR	75.181	75.154	74.965	74.583	73.997	73.214	72.731	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.222	0.222	0.221	0.220	0.218	0.216	0.215	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.117	10.118	10.122	10.129	10.129	10.129	10.130	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.714	9.715	9.718	9.722	9.727	9.732	9.735	
	BETABAR	7.228	9.853	11.652	11.990	12.025	9.815	6.062	
	EPSILON	-0.000	-0.879	-2.533	-4.135	-5.714	-7.260	-8.118	
	K-BAR	0.990	0.990	0.990	0.990	0.989	0.989	0.990	
	V-BAR	81.775	81.802	81.850	82.104	81.663	81.113	80.845	
	VZ-BAR	81.125	80.592	80.164	80.313	79.871	79.922	80.393	
	V-THET-BAR	10.289	13.998	16.530	17.056	17.013	13.827	8.538	
	MACH-BAR	0.242	0.242	0.242	0.243	0.241	0.240	0.239	
	INCID-H	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.9	-3.9	-3.5	-4.5	-5.9	-9.4	-13.9	
	OMEGABAR	0.042	0.039	0.029	0.008	0.006	0.006	0.006	
	TURNING	-7.2	-9.9	-11.7	-12.0	-12.0	-9.8	-6.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.117	10.118	10.122	10.129	10.129	10.129	10.130	10.126
NCOR= 1.035	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2525.0	P-STATIC	9.480	9.482	9.486	9.489	9.493	9.496	9.495	
	BETABAR	5.713	7.877	9.411	9.786	9.867	8.069	4.999	
	EPSILON	-1.170	-2.000	-3.738	-5.380	-6.838	-7.450	-6.637	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	103.275	103.135	103.124	103.368	103.080	102.849	102.951	
	VZ-BAR	102.762	102.159	101.736	101.864	101.555	101.829	102.559	
	V-THET-BAR	10.281	14.133	16.862	17.568	17.663	14.436	8.971	
	MACH-BAR	0.306	0.306	0.306	0.307	0.306	0.305	0.305	
	U-WHEEL	161.043	165.837	175.425	185.013	194.602	204.190	208.984	
	V-BAR-PR	182.454	182.895	188.396	195.996	204.012	215.351	224.774	
	BETABAR-PR	55.721	56.043	57.315	58.685	60.145	61.779	62.853	
	V-THET-B-P	-150.763	-151.708	-158.564	-167.445	-176.939	-189.753	-200.013	
	MACH-BAR-P	0.541	0.542	0.559	0.581	0.605	0.639	0.666	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.471	12.563	12.581	12.481	12.392	12.157	12.015	12.440
ROTOR	T-TOTAL	307.76	307.81	307.56	306.73	307.20	308.66	309.78	307.55
-----	P-STATIC	10.402	10.455	10.570	10.671	10.753	10.829	10.869	
PR = 1.2285	BETABAR	49.321	49.394	48.546	47.059	48.662	54.700	59.733	
TR = 1.0673	EPSILON	-2.886	-2.849	-3.700	-5.168	-6.487	-6.845	-6.418	
EFF-A = 0.9031	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9031	V-BAR	176.707	177.833	173.176	164.236	156.542	141.965	132.585	
	VZ-BAR	115.181	115.745	114.646	111.885	103.400	82.060	66.827	
	V-THET-BAR	134.010	135.011	129.792	120.229	117.524	115.810	114.512	
	MACH-BAR	0.516	0.519	0.505	0.478	0.455	0.410	0.381	
	U-WHEEL	159.151	163.820	173.158	182.496	191.834	201.172	205.841	
	V-BAR-PR	117.894	119.277	122.575	128.052	127.349	118.473	113.167	
	BETABAR-PR	12.313	13.977	20.719	29.096	35.709	46.152	53.807	
	V-THET-B-P	-25.141	-28.809	-43.366	-62.267	-74.310	-85.362	-91.329	
	MACH-BAR-P	0.344	0.348	0.357	0.373	0.370	0.342	0.325	
	D-FACTOR	0.590	0.584	0.577	0.557	0.583	0.660	0.705	
	TURNING	43.4	42.1	36.6	29.6	24.4	15.6	9.0	
	INCID-H	-1.7	-0.1	2.0	3.1	3.3	3.1	3.1	
	DEVIATION	24.2	17.7	12.1	11.4	10.5	14.9	20.0	
	OMEGABAR-P	0.114	0.077	0.053	0.045	0.097	0.227	0.304	
	LOSS PAR	0.039	0.027	0.019	0.016	0.033	0.069	0.081	
	PT-RATIO	1.233	1.242	1.243	1.232	1.223	1.200	1.186	1.2285
	EFF-AD	0.907	0.937	0.953	0.955	0.899	0.754	0.667	0.9031
	EFF-POLY	0.909	0.938	0.954	0.956	0.901	0.759	0.675	0.9031
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.471	12.562	12.582	12.483	12.396	12.162	12.015	12.440
	T-TOTAL	307.76	307.81	307.57	306.73	307.17	308.63	309.78	307.55
	P-STATIC	10.407	10.441	10.540	10.631	10.701	10.761	10.796	
	BETABAR	49.487	49.283	48.253	46.582	47.825	53.031	57.423	
	EPSILON	-0.713	-1.136	-3.029	-4.141	-5.070	-6.709	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	176.517	178.399	174.594	166.243	159.323	145.923	136.874	
	VZ-BAR	114.668	116.374	116.252	114.262	106.972	87.773	73.698	
	V-THET-BAR	134.199	135.216	130.263	120.751	118.067	116.548	115.339	
	MACH-BAR	0.515	0.521	0.509	0.484	0.463	0.422	0.394	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.257	12.435	12.416	12.326	12.248	12.050	11.826	12.287
ROTOR PLUS STATOR	T-TOTAL	307.76	307.81	307.58	306.75	307.09	308.48	309.78	307.55
----------	P-STATIC	11.244	11.248	11.241	11.227	11.209	11.188	11.176	
PR = 1.2134	BETABAR	15.677	14.326	12.823	12.524	12.677	11.464	9.412	
TR = 1.0673	EPSILON	0.450	-0.148	-1.225	-2.127	-3.022	-4.373	-5.489	
EFF-A = 0.8446	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8488	V-BAR	122.715	132.188	131.533	127.388	124.234	114.040	99.917	
	VZ-BAR	118.150	120.078	128.253	124.357	121.205	111.764	98.572	
	V-THET-BAR	33.158	32.703	29.193	27.624	27.264	22.670	16.340	
IGV,ROTOR,STATOR	MACH-BAR	0.353	0.381	0.379	0.368	0.358	0.327	0.285	
----------	EFF-POLY	0.816	0.878	0.827	0.806	0.806	0.836	0.684	
PR = 1.2127	INCID-H	-6.2	-3.4	-2.6	-3.9	-3.7	-0.6	2.6	
TR = 1.0673	DEVIATION	14.9	13.0	11.9	12.2	13.3	13.4	12.4	
EFF-A = 0.8449	OMEGA-BAR	0.108	0.060	0.081	0.085	0.087	0.080	0.155	
EFF-P = 0.8468	LOSS PAR	0.035	0.021	0.030	0.033	0.035	0.034	0.068	
	D-FACTOR	0.508	0.468	0.469	0.461	0.462	0.505	0.594	
	TURNING	33.8	35.0	35.4	34.1	35.1	41.6	48.0	

Table B-7. Nominal Scaled Stage with Decreased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 102)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
NCOR= 0.964	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2539.0	P-STATIC	9.835	9.836	9.837	9.840	9.845	9.851	9.854	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.615	-4.203	-5.768	-7.284	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	69.891	69.864	69.683	69.329	68.788	68.061	67.613	
	VZ-BAR	69.891	69.864	69.683	69.329	68.788	68.061	67.613	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.206	0.206	0.206	0.205	0.203	0.201	0.199	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.119	10.120	10.123	10.129	10.129	10.129	10.130	10.126
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.798	9.799	9.801	9.805	9.809	9.813	9.815	
	BETABAR	5.886	9.624	11.532	11.971	12.097	9.869	5.908	
	EPSILON	-0.000	-0.879	-2.547	-4.120	-5.702	-7.260	-8.118	
	K-BAR	1.030	1.030	1.030	1.030	1.029	1.029	1.030	
	V-BAR	72.813	72.879	72.916	73.191	72.755	72.231	72.062	
	VZ-BAR	72.288	71.850	71.848	71.600	71.139	71.160	71.679	
	V-THET-BAR	8.730	12.183	14.577	15.181	15.247	12.380	7.417	
	MACH-BAR	0.215	0.215	0.215	0.216	0.215	0.213	0.213	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.2	-4.1	-3.6	-4.5	-5.8	-9.4	-14.0	
	OMEGABAR	0.042	0.039	0.030	0.009	0.008	0.008	0.006	
	TURNING	-6.9	-9.6	-11.5	-12.0	-12.1	-9.9	-5.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.119	10.120	10.123	10.129	10.129	10.129	10.130	10.126
NCOR= 0.965	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
NCOR= 2539.0	P-STATIC	9.614	9.616	9.618	9.621	9.626	9.630	9.628	
	BETABAR	5.458	7.728	9.338	9.802	9.965	8.153	4.895	
	EPSILON	-1.170	-2.005	-3.969	-6.156	-8.055	-8.896	-6.637	
	K-BAR	1.030	1.030	1.030	1.030	1.030	1.030	1.030	
	V-BAR	91.712	91.635	91.641	91.897	91.492	91.132	91.342	
	VZ-BAR	91.297	90.800	90.427	90.555	90.112	90.209	91.009	
	V-THET-BAR	8.723	12.321	14.869	15.644	15.832	12.924	7.794	
	MACH-BAR	0.271	0.271	0.271	0.272	0.271	0.270	0.270	
	U-WHEEL	161.939	166.759	176.400	186.042	195.683	205.325	210.145	
	V-BAR-PR	178.354	179.153	185.121	192.966	201.164	212.500	221.875	
	BETABAR-PR	59.210	59.547	60.758	62.011	63.387	64.879	65.784	
	V-THET-B-P	-153.215	-154.438	-161.531	-170.397	-179.851	-192.407	-202.351	
	MACH-BAR-P	0.528	0.530	0.548	0.571	0.595	0.629	0.657	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	12.471	12.628	12.732	12.694	12.548	12.215	12.015	12.589
ROTOR	T-TOTAL	307.76	307.82	307.95	307.46	307.85	309.44	310.64	307.99
-----	P-STATIC	10.596	10.651	10.772	10.872	10.949	11.023	11.061	
PR = 1.2433	BETABAR	51.784	50.662	49.685	48.201	50.512	60.449	75.542	
TR = 1.0688	EPSILON	-2.885	-2.601	-3.655	-5.589	-7.080	-7.225	-6.418	
EFF-A = 0.9360	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9349	V-BAR	167.689	171.360	169.889	163.539	153.493	134.050	120.772	
	VZ-BAR	103.737	108.625	109.916	109.003	97.616	66.134	30.153	
	V-THET-BAR	131.751	132.532	129.539	121.916	118.442	116.561	116.947	
	MACH-BAR	0.488	0.499	0.495	0.476	0.445	0.386	0.346	
	U-WHEEL	160.036	164.731	174.120	183.510	192.900	202.290	206.985	
	V-BAR-PR	107.524	113.297	118.620	125.210	122.794	108.326	94.953	
	BETABAR-PR	15.252	16.510	22.073	29.468	37.344	52.378	71.485	
	V-THET-B-P	-28.285	-32.199	-44.581	-61.595	-74.458	-85.729	-90.038	
	MACH-BAR-P	0.313	0.330	0.345	0.364	0.356	0.312	0.272	
	D-FACTOR	0.637	0.607	0.595	0.574	0.609	0.712	0.791	
	TURNING	48.0	43.0	38.7	32.5	26.0	12.5	-5.7	
	INCID-M	1.8	3.4	5.5	6.5	6.5	6.2	6.0	
	DEVIATION	27.1	20.2	13.5	11.8	12.2	21.2	37.6	
	OMEGABAR-P	0.120	0.054	0.016	0.005	0.077	0.245	0.347	
	LOSS PAR	0.041	0.019	0.006	0.002	0.026	0.066	0.049	
	PT-RATIO	1.232	1.248	1.258	1.253	1.238	1.206	1.186	1.2433
	EFF-AD	0.906	0.958	0.987	0.996	0.923	0.745	0.641	0.9360
	EFF-POLY	0.908	0.959	0.986	0.995	0.925	0.751	0.649	0.9349
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	12.471	12.624	12.732	12.697	12.556	12.228	12.015	12.589
	T-TOTAL	307.76	307.82	307.97	307.47	307.81	309.37	310.64	307.99
	P-STATIC	10.600	10.640	10.746	10.845	10.920	10.988	11.027	
	BETABAR	51.972	50.605	49.474	47.952	49.915	59.108	73.311	
	EPSILON	-0.113	-1.170	-3.423	-4.271	-5.236	-6.697	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	167.495	171.723	171.032	164.934	155.480	136.708	122.971	
	VZ-BAR	103.185	108.988	111.135	110.466	100.118	70.227	35.314	
	V-THET-BAR	131.937	132.703	130.003	122.477	118.952	117.219	117.792	
	MACH-BAR	0.487	0.500	0.498	0.480	0.451	0.394	0.352	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	12.305	12.463	12.509	12.422	12.284	12.115	11.826	12.353
ROTOR PLUS STATOR	T-TOTAL	307.76	307.82	307.98	307.51	307.64	308.92	310.64	307.99
----------	P-STATIC	11.404	11.407	11.402	11.390	11.375	11.359	11.351	
PR = 1.2199	BETABAR	15.031	14.808	13.329	13.299	13.078	12.316	11.208	
TR = 1.0688	EPSILON	0.450	-0.185	-0.976	-1.503	-2.088	-3.318	-5.489	
EFF-A = 0.8491	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.8533	V-BAR	115.266	124.266	127.108	122.974	115.834	106.329	85.811	
	VZ-BAR	111.322	120.139	123.683	119.676	112.830	103.881	83.685	
	V-THET-BAR	29.894	31.759	29.304	28.287	26.210	22.687	16.581	
IGV,ROTOR,STATOR	MACH-BAR	0.331	0.358	0.366	0.354	0.333	0.305	0.243	
----------	EFF-POLY	0.844	0.843	0.768	0.686	0.671	0.887	0.645	
PR = 1.2192	INCID-M	-3.7	-2.0	-1.4	-2.6	-1.6	5.5	18.5	
TR = 1.0688	DEVIATION	14.3	13.5	12.4	12.9	13.7	14.3	14.1	
EFF-A = 0.8497	OMEGA-BAR	0.089	0.081	0.112	0.149	0.166	0.091	0.191	
EFF-P = 0.8511	LOSS PAR	0.030	0.029	0.042	0.057	0.067	0.038	0.083	
	D-FACTOR	0.528	0.490	0.483	0.487	0.512	0.541	0.675	
	TURNING	36.9	35.8	36.1	34.7	36.8	46.8	62.1	

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Table B-7. Nominal Scaled Stage with Decreased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 103)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.342	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3062.7	P-STATIC	9.564	9.565	9.568	9.574	9.583	9.595	9.602	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.593	-4.200	-5.757	-7.284	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	97.200	97.163	96.899	96.375	95.581	94.508	93.853	
	VZ-BAR	97.200	97.163	96.899	96.375	95.581	94.508	93.853	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.288	0.288	0.287	0.285	0.283	0.280	0.278	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.106	10.107	10.115	10.126	10.127	10.126	10.125	10.121
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.449	9.450	9.455	9.462	9.470	9.478	9.483	
	BETABAR	8.195	10.057	11.702	12.065	11.895	9.659	5.882	
	EPSILON	-0.000	-0.879	-2.511	-4.130	-5.694	-7.260	-8.118	
	K-BAR	1.020	1.020	1.020	1.020	1.019	1.019	1.020	
	V-BAR	104.944	104.985	105.132	105.462	104.888	104.115	103.654	
	VZ-BAR	103.872	103.370	102.947	103.132	102.636	102.636	103.108	
	V-THET-BAR	18.959	18.332	21.322	22.044	21.619	17.470	10.622	
	MACH-BAR	0.311	0.311	0.312	0.313	0.311	0.309	0.307	
	INCID-H	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.9	-3.7	-3.4	-4.4	-6.0	-9.6	-14.0	
	OMEGABAR	0.045	0.042	0.030	0.009	0.008	0.009	0.011	
	TURNING	-8.2	-10.1	-11.7	-12.1	-11.9	-9.7	-5.9	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.106	10.108	10.115	10.127	10.127	10.126	10.125	10.121
WCOR= 1.343	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3062.7	P-STATIC	9.049	9.053	9.057	9.061	9.066	9.070	9.068	
	BETABAR	6.400	7.935	9.333	9.713	9.621	7.825	4.777	
	EPSILON	-1.170	-1.844	-3.473	-5.139	-6.666	-7.546	-6.637	
	K-BAR	1.020	1.020	1.020	1.020	1.020	1.020	1.020	
	V-BAR	134.097	133.944	134.108	134.548	134.282	133.955	134.016	
	VZ-BAR	133.262	132.660	132.332	132.620	132.394	132.705	133.551	
	V-THET-BAR	14.947	18.491	21.750	22.699	22.442	18.238	11.161	
	MACH-BAR	0.400	0.400	0.400	0.402	0.401	0.400	0.400	
	U-WHEEL	195.340	201.155	212.785	224.415	236.045	247.675	253.490	
	V-BAR-PR	224.277	225.753	232.394	241.408	251.307	265.052	276.693	
	BETABAR-PR	53.546	54.011	55.288	56.676	58.208	59.954	61.140	
	V-THET-B-P	-180.393	-182.663	-191.035	-201.716	-213.603	-229.437	-242.329	
	MACH-BAR-P	0.669	0.674	0.694	0.721	0.750	0.791	0.826	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.383	13.592	13.794	13.739	13.702	13.251	12.907	13.624
ROTOR	T-TOTAL	316.84	316.75	316.66	316.83	317.16	319.26	320.73	317.28
-----	P-STATIC	10.391	10.474	10.654	10.812	10.953	11.070	11.128	
PR = 1.3462	BETABAR	51.222	49.838	48.182	48.348	48.087	54.026	60.505	
TR = 1.1010	EPSILON	-2.885	-2.251	-3.260	-4.622	-6.208	-6.865	-6.418	
EFF-A = 0.8799	K-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
EFF-P = 0.8823	V-BAR	210.721	213.650	212.751	205.228	198.716	179.155	163.488	
	VZ-BAR	131.975	137.794	141.854	136.396	132.747	105.283	80.493	
	V-THET-BAR	164.278	163.273	158.557	153.345	147.868	144.895	142.299	
	MACH-BAR	0.612	0.621	0.619	0.595	0.575	0.513	0.465	
	U-WHEEL	193.045	198.708	210.035	221.361	232.688	244.015	249.678	
	V-BAR-PR	135.075	142.282	150.913	152.416	157.548	144.707	134.199	
	BETABAR-PR	12.298	14.417	19.944	26.503	32.581	43.312	53.144	
	V-THET-B-P	-28.771	-35.435	-51.477	-68.016	-84.820	-99.720	-107.379	
	MACH-BAR-P	0.392	0.414	0.439	0.442	0.456	0.414	0.382	
	D-FACTOR	0.629	0.599	0.573	0.585	0.584	0.668	0.726	
	TURNING	41.2	39.6	35.3	30.2	25.6	16.6	8.0	
	INCID-H	-3.8	-2.1	0.0	1.1	1.3	1.3	1.4	
	DEVIATION	24.2	18.2	11.3	8.8	7.4	12.1	19.3	
	OMEGABAR-P	0.190	0.129	0.070	0.088	0.101	0.245	0.339	
	LOSS PAR	0.065	0.045	0.025	0.032	0.036	0.078	0.091	
	PT-RATIO	1.324	1.345	1.364	1.357	1.353	1.309	1.275	1.3462
	EFF-AD	0.840	0.891	0.938	0.916	0.897	0.741	0.636	0.8799
	EFF-POLY	0.846	0.895	0.940	0.919	0.901	0.750	0.648	0.8823
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.383	13.587	13.792	13.741	13.711	13.263	12.907	13.624
	T-TOTAL	316.84	316.75	316.66	316.83	317.12	319.21	320.73	317.28
	P-STATIC	10.398	10.457	10.603	10.746	10.874	10.981	11.040	
	BETABAR	51.415	49.783	47.816	47.821	47.334	52.693	58.720	
	EPSILON	-0.113	-1.389	-2.698	-3.958	-4.928	-6.415	-7.979	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	210.451	214.168	214.602	207.788	202.033	183.449	167.704	
	VZ-BAR	131.253	138.285	144.107	139.518	136.925	111.222	87.075	
	V-THET-BAR	164.506	163.536	159.018	153.983	148.553	145.839	143.326	
	MACH-BAR	0.611	0.623	0.625	0.603	0.585	0.526	0.478	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.239	13.418	13.605	13.605	13.564	13.181	12.808	13.467
ROTOR PLUS STATOR	T-TOTAL	316.84	316.75	316.66	316.81	317.02	318.93	320.73	317.28
----------	P-STATIC	11.769	11.772	11.767	11.750	11.724	11.691	11.672	
PR = 1.3306	BETABAR	14.994	13.962	12.364	12.350	12.833	12.076	10.137	
TR = 1.1010	EPSILON	0.450	-0.084	-1.023	-1.990	-2.951	-4.166	-5.489	
EFF-A = 0.8415	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8478	V-BAR	145.095	152.834	160.749	161.574	161.168	146.942	129.897	
	VZ-BAR	140.155	148.319	157.021	157.835	157.142	143.690	127.869	
	V-THET-BAR	37.539	36.869	34.418	34.559	35.797	30.742	22.862	
IGV,ROTOR,STATOR	MACH-BAR	0.434	0.436	0.460	0.462	0.461	0.418	0.367	
----------	EFF-POLY	0.918	0.903	0.883	0.900	0.885	0.950	0.877	
PR = 1.3292	INCID-H	-4.2	-2.9	-3.0	-2.7	-4.2	-0.9	3.9	
TR = 1.1010	DEVIATION	14.2	12.7	11.5	12.0	13.5	14.1	13.1	
EFF-A = 0.8408	OMEGA-BAR	0.048	0.054	0.059	0.065	0.052	0.036	0.053	
EFF-P = 0.8447	LOSS PAR	0.017	0.019	0.022	0.018	0.021	0.015	0.023	
	D-FACTOR	0.524	0.501	0.474	0.455	0.439	0.482	0.548	
	TURNING	36.4	35.8	35.5	35.5	34.5	40.6	48.6	

Table B-7. Nominal Scaled Stage with Decreased Clearance Blade Element Performance — SI (Metric) Units (Continued)

(Data Point No. 104)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	0.1275	0.1324	0.1424	0.1524	0.1623	0.1723	0.1773	
	P-TOTAL	10.131	10.131	10.131	10.131	10.131	10.131	10.131	10.131
WCOR= 1.217	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3062.1	P-STATIC	9.670	9.670	9.673	9.678	9.685	9.695	9.701	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.584	-4.207	-5.757	-7.288	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	87.521	87.484	87.250	86.776	86.064	85.100	84.512	
	VZ-BAR	87.521	87.484	87.250	86.776	86.064	85.100	84.512	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.259	0.259	0.258	0.257	0.254	0.252	0.250	
IGV TRAILING EDGE	DIAMETER	0.1275	0.1321	0.1414	0.1507	0.1600	0.1693	0.1739	
	P-TOTAL	10.111	10.112	10.118	10.128	10.129	10.129	10.128	10.124
	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
	P-STATIC	9.554	9.555	9.560	9.565	9.572	9.580	9.584	
	BETABAR	7.839	10.030	11.693	12.036	11.954	9.729	6.076	
	EPSILON	-0.000	-0.879	-2.529	-4.135	-5.694	-7.282	-8.118	
	K-BAR	1.000	1.000	1.000	1.000	0.999	0.999	1.000	
	V-BAR	96.396	96.403	96.582	96.829	96.307	95.623	95.204	
	VZ-BAR	95.496	94.927	94.539	94.700	94.219	94.245	94.669	
	V-THET-BAR	13.147	16.789	19.566	20.191	19.947	16.160	10.078	
	MACH-BAR	0.285	0.286	0.286	0.287	0.285	0.283	0.282	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.2	-3.7	-3.4	-4.5	-5.9	-9.5	-13.8	
	OMEGABAR	0.044	0.042	0.029	0.008	0.005	0.006	0.008	
	TURNING	-7.8	-10.0	-11.7	-12.0	-12.0	-9.7	-6.1	
ROTOR LEADING EDGE	DIAMETER	0.1276	0.1314	0.1390	0.1465	0.1541	0.1617	0.1655	
	P-TOTAL	10.111	10.112	10.118	10.128	10.129	10.129	10.128	10.124
WCOR= 1.218	T-TOTAL	288.17	288.17	288.17	288.17	288.17	288.17	288.17	288.17
WCOR= 3062.1	P-STATIC	9.221	9.224	9.228	9.233	9.240	9.244	9.243	
	BETABAR	6.147	7.949	9.366	9.743	9.732	7.939	4.971	
	EPSILON	-1.170	-1.916	-3.734	-5.649	-7.286	-7.742	-6.637	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	122.685	122.521	122.621	122.889	122.497	122.156	122.210	
	VZ-BAR	121.980	121.341	120.986	121.117	120.738	120.983	121.751	
	V-THET-BAR	13.137	16.942	19.955	20.795	20.707	16.872	10.590	
	MACH-BAR	0.365	0.365	0.365	0.366	0.365	0.364	0.364	
	U-WHEEL	195.300	201.113	212.741	224.369	235.997	247.624	253.438	
	V-BAR-PR	219.232	220.551	227.606	236.880	246.834	260.586	271.659	
	BETABAR-PR	56.193	56.621	57.888	59.248	60.715	62.331	63.373	
	V-THET-B-P	-182.163	-184.171	-192.785	-203.573	-215.290	-230.752	-242.849	
	MACH-BAR-P	0.653	0.657	0.678	0.705	0.735	0.775	0.809	
ROTOR TRAILING EDGE	DIAMETER	0.1261	0.1298	0.1372	0.1446	0.1519	0.1593	0.1630	
	P-TOTAL	13.697	13.895	14.108	13.929	13.704	13.339	13.170	13.812
ROTOR	T-TOTAL	317.56	317.21	317.04	316.13	317.16	319.34	321.16	317.29
-----	P-STATIC	10.698	10.786	10.973	11.130	11.258	11.379	11.440	
PR = 1.3643	BETABAR	52.853	51.123	49.064	48.364	51.558	58.594	64.102	
TR = 1.1011	EPSILON	-2.885	-2.526	-3.613	-5.300	-6.658	-6.968	-6.418	
EFF-A = 0.9213	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9218	V-BAR	208.555	210.930	210.063	198.557	186.563	168.732	159.517	
	VZ-BAR	125.938	132.391	137.638	131.922	115.996	87.959	69.673	
	V-THET-BAR	166.237	164.205	158.690	148.396	146.107	143.933	143.497	
	MACH-BAR	0.605	0.612	0.610	0.575	0.537	0.482	0.453	
	U-WHEEL	193.005	198.667	209.992	221.316	232.640	243.965	249.627	
	V-BAR-PR	128.752	136.807	146.889	150.750	144.739	133.300	126.956	
	BETABAR-PR	12.000	14.587	20.442	28.933	36.731	48.704	56.716	
	V-THET-B-P	-26.769	-34.462	-51.302	-72.920	-86.533	-100.032	-106.130	
	MACH-BAR-P	0.373	0.397	0.427	0.437	0.417	0.381	0.361	
	D-FACTOR	0.656	0.618	0.586	0.580	0.629	0.706	0.750	
	TURNING	44.2	42.0	37.4	30.3	24.0	13.6	6.7	
	INCID-R	-1.2	0.5	2.6	3.7	3.8	3.7	3.6	
	DEVIATION	23.9	18.3	11.8	11.3	11.5	17.5	22.9	
	OMEGABAR-P	0.143	0.071	0.007	0.019	0.104	0.237	0.312	
	LOSS PAR	0.049	0.025	0.003	0.007	0.035	0.069	0.077	
	PT-RATIO	1.355	1.374	1.394	1.375	1.353	1.317	1.300	1.3643
	EFF-AD	0.889	0.943	0.994	0.982	0.897	0.757	0.681	0.9213
	EFF-POLY	0.893	0.945	0.994	0.983	0.901	0.766	0.692	0.9218
STATOR LEADING EDGE	DIAMETER	0.1259	0.1295	0.1367	0.1439	0.1511	0.1583	0.1619	
	P-TOTAL	13.697	13.891	14.107	13.935	13.713	13.345	13.170	13.812
	T-TOTAL	317.56	317.22	317.05	316.13	317.12	319.29	321.16	317.29
	P-STATIC	10.704	10.769	10.933	11.076	11.191	11.300	11.361	
	BETABAR	53.039	51.077	48.833	47.904	50.738	57.119	62.258	
	EPSILON	-0.113	-1.494	-3.260	-4.278	-5.453	-6.667	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	208.338	211.446	211.506	200.823	189.564	172.525	163.305	
	VZ-BAR	125.268	132.847	139.225	134.628	119.975	93.690	76.018	
	V-THET-BAR	166.472	164.498	159.220	149.013	146.755	144.820	144.533	
	MACH-BAR	0.604	0.614	0.614	0.582	0.547	0.493	0.464	
STATOR TRAILING EDGE	DIAMETER	0.1261	0.1293	0.1357	0.1421	0.1485	0.1549	0.1581	
	P-TOTAL	13.854	13.636	13.717	13.585	13.421	13.169	12.877	13.499
ROTOR PLUS STATOR	T-TOTAL	317.56	317.22	317.06	316.14	316.91	319.01	321.16	317.29
----------	P-STATIC	12.025	12.028	12.019	11.998	11.974	11.946	11.930	
PR = 1.3334	BETABAR	14.563	13.336	12.616	12.426	12.289	11.395	9.966	
TR = 1.1011	EPSILON	0.450	-0.188	-1.134	-1.922	-2.672	-4.207	-5.489	
EFF-A = 0.8476	K-BAR	0.885	0.885	0.885	0.885	0.885	0.885	0.885	
EFF-P = 0.8537	V-BAR	141.940	149.825	153.645	148.820	142.897	132.623	118.018	
	VZ-BAR	137.380	145.785	149.936	145.334	139.623	130.007	116.237	
	V-THET-BAR	35.689	34.555	33.557	32.022	30.414	26.208	20.425	
IGV,ROTOR,STATOR	MACH-BAR	0.404	0.427	0.439	0.425	0.407	0.376	0.332	
----------	EFF-POLY	0.866	0.855	0.769	0.757	0.777	0.843	0.683	
PR = 1.3324	INCID-R	-2.6	-1.6	-2.0	-2.6	-0.8	3.5	7.5	
TR = 1.1011	DEVIATION	13.8	12.0	11.7	12.1	12.9	13.4	12.9	
EFF-A = 0.8481	OMEGA-BAR	0.081	0.082	0.123	0.122	0.116	0.086	0.162	
EFF-P = 0.8515	LOSS PAR	0.028	0.029	0.046	0.047	0.047	0.037	0.071	
	D-FACTOR	0.541	0.515	0.501	0.496	0.507	0.537	0.618	
	TURNING	38.5	37.7	36.2	35.5	38.4	45.7	52.3	

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APPENDIX C
BLADE ELEMENT AND OVERALL PERFORMANCE DATA — U. S. CUSTOMARY UNITS

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Table C-1. Nominal Scaled Stage Aerodynamic Design Point Blade Element Performance — U.S. Customary Units

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.378	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=34408.6	P-STATIC	13.524	13.525	13.532	13.545	13.565	13.590	13.605	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.667	-4.343	-5.889	-7.364	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	382.150	381.983	380.856	378.599	375.282	370.900	368.341	
	VZ-BAR	382.150	381.983	380.856	378.599	375.282	370.900	368.341	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.346	0.346	0.345	0.343	0.340	0.336	0.333	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.616	14.630	14.655	14.653	14.657	14.652	14.643	14.650
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.179	13.183	13.194	13.206	13.221	13.239	13.249	
	BETABAR	10.592	10.664	11.167	11.738	12.160	13.164	13.944	
	EPSILON	-0.000	-0.904	-2.623	-4.267	-5.864	-7.369	-8.118	
	K-BAR	0.971	0.971	0.971	0.971	0.970	0.970	0.971	
	V-BAR	426.078	427.367	429.186	427.017	425.281	421.884	419.004	
	VZ-BAR	418.818	419.987	421.021	418.088	415.739	410.797	406.656	
	V-THET-BAR	78.320	79.082	83.110	86.870	89.581	96.077	100.970	
	MACH-BAR	0.387	0.388	0.390	0.388	0.386	0.383	0.381	
	INCID-B	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-2.5	-3.1	-4.0	-4.8	-5.7	-6.1	-6.0	
	OMEGABAR	0.067	0.055	0.034	0.036	0.033	0.038	0.048	
	TURNING	-10.6	-10.7	-11.2	-11.7	-12.2	-13.2	-13.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.616	14.630	14.655	14.653	14.657	14.652	14.643	14.650
WCOR= 3.388	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=34408.6	P-STATIC	12.121	12.131	12.141	12.146	12.151	12.155	12.154	
	BETABAR	7.897	8.032	8.533	9.028	9.399	10.181	10.759	
	EPSILON	-1.170	-1.756	-3.030	-4.447	-5.772	-6.614	-6.637	
	K-BAR	0.953	0.953	0.953	0.953	0.953	0.953	0.953	
	V-BAR	569.591	569.800	571.122	570.259	570.098	569.168	568.362	
	VZ-BAR	564.189	564.211	564.799	563.194	562.446	560.205	558.371	
	V-THET-BAR	78.257	79.612	84.786	89.487	93.097	100.607	106.099	
	MACH-BAR	0.524	0.524	0.525	0.524	0.524	0.523	0.523	
	U-WHEEL	753.984	776.427	821.318	866.208	911.099	955.989	978.435	
	V-BAR-PR	880.294	896.602	928.195	959.423	992.714	1022.504	1035.735	
	BETABAR-PR	50.140	51.002	52.518	54.054	55.488	56.778	57.377	
	V-THET-B-P	-675.727	-696.815	-736.572	-776.721	-818.002	-855.383	-872.336	
	MACH-BAR-P	0.810	0.825	0.854	0.882	0.913	0.940	0.952	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	22.913	22.555	22.315	22.224	21.971	21.458	21.193	22.097
ROTOR	T-TOTAL	598.12	595.66	588.52	586.89	587.25	590.19	589.61	589.47
-----	P-STATIC	14.878	15.071	15.452	15.776	16.054	16.316	16.458	
PR = 1.5084	BETABAR	51.985	50.769	45.958	44.731	45.394	49.900	51.474	
TR = 1.1364	EPSILON	-2.885	-2.706	-3.145	-4.367	-5.551	-6.355	-6.418	
EFF-A = 0.9141	K-BAR	0.876	0.876	0.876	0.876	0.876	0.876	0.876	
EFF-P = 0.9182	V-BAR	913.281	882.337	839.483	810.937	777.806	730.638	702.636	
	VZ-BAR	562.456	557.998	583.552	576.106	546.197	470.624	437.650	
	V-THET-BAR	719.531	683.476	603.456	570.719	553.755	558.876	589.691	
	MACH-BAR	0.810	0.781	0.744	0.717	0.685	0.638	0.612	
	U-WHEEL	745.126	766.984	810.703	854.423	898.143	941.862	963.721	
	V-BAR-PR	563.038	564.380	619.372	642.211	645.725	606.779	602.460	
	BETABAR-PR	2.606	8.511	19.542	26.217	32.233	39.139	43.411	
	V-THET-B-P	-25.595	-83.508	-207.247	-283.703	-348.387	-382.986	-414.030	
	MACH-BAR-P	0.499	0.500	0.549	0.568	0.568	0.530	0.525	
	D-FACTOR	0.614	0.611	0.583	0.530	0.583	0.601	0.608	
	TURNING	47.5	42.5	33.0	27.8	23.3	17.6	14.0	
	INCID-B	-7.2	-5.1	-2.8	-1.5	-1.4	-1.9	-2.4	
	DEVIATION	14.5	12.3	10.9	8.5	7.0	7.9	9.6	
	OMEGABAR-P	0.136	0.138	0.056	0.038	0.068	0.153	0.169	
	LOSS PAR	0.047	0.049	0.020	0.014	0.024	0.052	0.055	
	PT-RATIO	1.568	1.542	1.523	1.517	1.499	1.465	1.447	1.5084
	EFF-AD	0.895	0.887	0.948	0.962	0.928	0.836	0.815	0.9141
	EFF-POLY	0.902	0.894	0.951	0.964	0.932	0.844	0.824	0.9182
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	22.913	22.563	22.318	22.227	21.983	21.466	21.193	22.097
	T-TOTAL	598.12	595.72	588.63	586.87	587.20	590.18	589.61	589.47
	P-STATIC	18.732	18.853	15.124	15.379	15.637	15.898	16.039	
	BETABAR	51.321	49.768	44.648	43.060	43.470	47.449	48.765	
	EPSILON	-0.113	-0.897	-2.783	-3.686	-4.960	-6.400	-7.979	
	K-BAR	0.855	0.855	0.855	0.855	0.855	0.855	0.855	
	V-BAR	923.004	897.614	862.542	839.174	808.777	763.476	736.234	
	VZ-BAR	576.843	579.712	613.599	613.136	586.969	516.301	485.285	
	V-THET-BAR	720.587	685.283	606.154	572.956	556.800	562.827	553.659	
	MACH-BAR	0.820	0.796	0.767	0.745	0.715	0.669	0.644	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	21.491	21.461	21.854	21.973	21.643	21.143	20.911	21.615
ROTOR PLUS STATOR	T-TOTAL	598.12	595.70	588.65	586.86	587.17	590.14	589.61	589.47
----------	P-STATIC	18.244	18.243	18.232	18.192	18.129	18.053	18.011	
PR = 1.4755	BETABAR	13.594	13.021	11.086	9.762	9.319	8.490	8.230	
TR = 1.1364	EPSILON	0.450	-0.239	-1.389	-2.522	-3.582	-4.764	-5.489	
EFF-A = 0.8615	K-BAR	0.873	0.873	0.873	0.873	0.873	0.873	0.873	
EFF-P = 0.8689	V-BAR	573.217	569.661	597.322	608.482	590.038	559.311	543.873	
	VZ-BAR	557.158	555.013	586.167	599.673	582.250	553.181	538.272	
	V-THET-BAR	134.730	128.346	114.829	103.169	95.549	82.580	77.851	
IGV,ROTOR,STATOR	MACH-BAR	0.489	0.487	0.515	0.526	0.509	0.480	0.467	
----------	EFF-POLY	0.768	0.803	0.897	0.934	0.904	0.893	0.895	
PR = 1.4709	INCID-B	-4.3	-2.9	-6.2	-7.5	-8.0	-6.2	-6.0	
TR = 1.1364	DEVIATION	12.8	11.7	10.2	9.4	9.9	10.5	11.2	
EFF-A = 0.8565	OMEGA-BAR	0.174	0.143	0.064	0.037	0.054	0.058	0.055	
EFF-P = 0.8620	LOSS PAR	0.060	0.051	0.024	0.015	0.022	0.025	0.024	
	D-FACTOR	0.604	0.591	0.526	0.500	0.510	0.544	0.551	
	TURNING	37.7	36.7	33.6	33.3	34.2	39.0	40.5	

Table C-2. Base Stage Blade Element Performance — U.S. Customary Units

(Data Point No. 1)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	16.500	17.135	18.406	19.677	20.948	22.219	22.855	
	P-TOTAL	14.399	14.703	14.711	14.711	14.710	14.705	14.456	14.696
WCOR=36.473	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=10470.8	P-STATIC	13.596	13.579	13.580	13.584	13.589	13.597	13.614	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.037	-2.794	-4.452	-5.997	-7.407	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	318.330	374.198	375.246	374.592	373.446	371.447	325.483	
	VZ-BAR	318.330	374.198	375.246	374.592	373.446	371.447	325.483	
	V-THET-BAR	0.000	0.001	0.000	0.001	0.001	0.001	0.000	
	MACH-BAR	0.287	0.339	0.340	0.339	0.338	0.336	0.294	
IGV TRAILING EDGE	DIAMETER	16.500	17.093	18.280	19.467	20.654	21.841	22.435	
	P-TOTAL	14.343	14.639	14.671	14.669	14.672	14.661	14.413	14.651
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.421	13.231	13.240	13.250	13.263	13.278	13.280	
	BETABAR	10.889	10.935	11.481	12.117	12.616	13.731	14.613	
	EPSILON	-0.000	-0.993	-2.731	-4.374	-5.906	-7.303	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	378.617	421.267	424.346	422.435	420.876	417.063	379.604	
	VZ-BAR	371.800	413.618	415.856	413.023	410.714	405.144	367.325	
	V-THET-BAR	71.520	79.912	84.458	88.670	91.925	98.989	93.209	
	MACH-BAR	0.343	0.383	0.386	0.384	0.382	0.379	0.344	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-2.1	-2.0	-3.1	-3.5	-4.1	-4.0	-3.7	
	OMEGABAR	0.070	0.057	0.035	0.037	0.034	0.040	0.051	
	TURNING	-10.9	-10.9	-11.5	-12.1	-12.6	-13.7	-14.0	
ROTOR LEADING EDGE	DIAMETER	16.500	16.986	17.958	18.930	19.902	20.874	21.360	
	P-TOTAL	14.343	14.641	14.671	14.669	14.672	14.662	14.413	14.651
WCOR=36.586	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=10470.8	P-STATIC	12.169	12.164	12.154	12.150	12.154	12.165	12.169	
	BETABAR	7.088	8.169	8.870	9.145	9.621	10.488	10.088	
	EPSILON	-0.000	-0.821	-2.477	-4.275	-5.972	-7.102	-7.241	
	K-BAR	0.967	0.967	0.967	0.967	0.967	0.967	0.967	
	V-BAR	534.650	566.901	571.145	571.496	571.203	568.841	542.367	
	VZ-BAR	529.844	561.146	564.618	564.155	563.169	559.338	532.956	
	V-THET-BAR	71.521	80.554	86.097	91.304	95.462	103.544	100.589	
	MACH-BAR	0.490	0.521	0.525	0.526	0.525	0.523	0.496	
	U-WHEEL	753.640	776.047	820.455	864.864	909.272	953.680	975.884	
	V-BAR-PR	863.888	893.644	926.331	957.430	989.674	1017.646	1024.785	
	BETABAR-PR	52.170	51.102	52.444	53.896	55.316	56.057	56.003	
	V-THET-B-P	-686.325	-695.493	-734.358	-773.559	-813.810	-850.136	-875.295	
	MACH-BAR-P	0.792	0.822	0.852	0.881	0.910	0.936	0.940	
ROTOR TRAILING EDGE	DIAMETER	16.500	16.946	17.839	18.732	19.625	20.518	20.965	
	P-TOTAL	23.092	22.847	22.476	22.316	21.990	21.374	21.057	22.197
ROTOR	T-TOTAL	601.34	597.17	588.38	586.68	586.24	589.04	590.57	589.44
PR = 1.5151	P-STATIC	14.851	15.091	15.497	15.822	16.101	16.354	16.483	
TR = 1.1364	BETABAR	52.111	50.408	45.389	44.760	45.316	50.449	53.027	
EFF-A = 0.9248	EPSILON	-0.000	-0.704	-2.246	-3.947	-5.567	-6.858	-7.367	
EFF-P = 0.9285	K-BAR	0.935	0.933	0.933	0.933	0.933	0.933	0.933	
	V-BAR	925.180	895.296	843.993	812.317	774.637	721.840	692.430	
	VZ-BAR	568.179	570.517	592.678	576.792	544.766	459.659	416.456	
	V-THET-BAR	730.156	689.922	600.842	571.986	550.780	556.526	553.194	
	MACH-BAR	0.820	0.793	0.748	0.718	0.684	0.630	0.602	
	U-WHEEL	753.644	774.242	815.041	855.841	896.640	937.438	957.837	
	V-BAR-PR	568.672	576.894	630.307	642.876	645.302	597.040	580.665	
	BETABAR-PR	2.387	6.396	19.861	26.203	32.412	39.654	44.176	
	V-THET-B-P	-23.686	-84.320	-214.199	-283.664	-345.860	-380.912	-404.643	
	MACH-BAR-P	0.504	0.511	0.559	0.569	0.568	0.521	0.505	
	D-FACTOR	0.608	0.600	0.530	0.529	0.540	0.606	0.629	
	TURNING	49.8	42.7	32.6	27.7	22.9	17.0	14.5	
	INCID-M	-5.4	-5.1	-2.8	-1.6	-1.5	-1.9	-0.4	
	DEVIATION	14.8	12.5	11.2	8.1	7.0	8.1	9.0	
	OMEGABAR-P	0.119	0.131	0.057	0.031	0.055	0.146	0.163	
	LOSS PAR	0.042	0.047	0.013	0.011	0.020	0.049	0.053	
	PT-RATIO	1.010	1.560	1.532	1.521	1.499	1.460	1.461	1.5151
	EFF-AD	0.915	0.890	0.965	0.969	0.941	0.842	0.826	0.9248
	EFF-POLY	0.920	0.902	0.967	0.971	0.944	0.850	0.835	0.9285
STATOR LEADING EDGE	DIAMETER	16.500	16.930	17.790	18.650	19.510	20.370	20.800	
	P-TOTAL	23.092	22.851	22.482	22.321	22.006	21.386	21.057	22.197
	T-TOTAL	601.34	597.25	588.54	586.87	586.20	588.98	590.57	589.44
	P-STATIC	14.572	14.787	15.158	15.452	15.716	15.924	16.014	
	BETABAR	50.698	48.985	44.060	43.208	43.519	47.800	49.742	
	EPSILON	-0.000	-0.734	-2.299	-3.858	-5.287	-6.672	-7.356	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	943.574	915.912	867.777	838.613	803.586	756.169	730.645	
	VZ-BAR	597.663	600.997	623.541	611.240	582.718	507.939	472.170	
	V-THET-BAR	730.158	691.095	603.471	574.157	553.345	560.154	557.582	
	MACH-BAR	0.838	0.813	0.772	0.744	0.710	0.663	0.638	
STATOR TRAILING EDGE	DIAMETER	16.500	16.886	17.658	18.430	19.202	19.974	20.360	
	P-TOTAL	21.645	21.780	22.068	22.111	21.711	21.117	20.812	21.751
ROTOR PLUS STATOR	T-TOTAL	601.34	597.24	588.57	586.87	586.20	588.90	590.57	589.44
	P-STATIC	18.413	18.419	18.414	18.382	18.326	18.257	18.221	
PR = 1.4847	BETABAR	13.441	12.258	9.747	9.766	9.871	9.151	8.780	
TR = 1.1364	EPSILON	-0.000	-0.649	-1.852	-3.010	-4.177	-5.465	-6.309	
EFF-A = 0.8764	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8831	V-BAR	571.206	579.213	596.975	602.003	576.975	536.759	514.225	
	VZ-BAR	555.561	566.003	588.355	593.280	568.433	529.928	508.199	
	V-THET-BAR	132.776	122.959	101.052	102.111	98.910	85.362	78.496	
IGV,ROTOR,STATOR	MACH-BAR	0.486	0.495	0.515	0.520	0.498	0.461	0.440	
	EFF-POLY	0.782	0.819	0.910	0.947	0.917	0.916	0.915	
PR = 1.4801	INCID-M	-4.9	-3.6	-6.8	-7.3	-8.1	-6.1	-4.2	
TR = 1.1364	DEVIATION	12.6	10.9	8.9	9.4	10.6	11.3	11.9	
EFF-A = 0.8717	OMEGA-BAR	0.170	0.133	0.057	0.031	0.047	0.049	0.049	
EFF-P = 0.8763	LOSS PAR	0.059	0.047	0.021	0.012	0.019	0.021	0.021	
	D-FACTOR	0.619	0.594	0.534	0.509	0.521	0.567	0.591	
	TURNING	37.3	36.7	34.3	33.4	33.6	38.6	41.0	

Table C-2. Base Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 2)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	16.500	17.135	18.406	19.677	20.948	22.219	22.855	
	P-TOTAL	14.386	14.691	14.720	14.725	14.700	14.701	14.452	14.695
WCOR=38.435	I-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=10446.1	P-STATIC	13.459	13.443	13.444	13.447	13.455	13.463	13.480	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.049	-2.800	-4.449	-5.981	-7.396	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	342.750	395.007	399.305	399.413	394.542	393.288	350.354	
	VZ-BAR	342.750	395.007	399.305	399.413	394.542	393.288	350.354	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.001	0.000	
	MACH-BAR	0.310	0.358	0.362	0.362	0.358	0.357	0.317	
IGV TRAILING EDGE	DIAMETER	16.500	17.093	18.280	19.467	20.654	21.841	22.435	
	P-TOTAL	14.324	14.621	14.662	14.666	14.653	14.640	14.393	14.637
	I-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.032	13.043	13.053	13.065	13.079	13.095	13.098	
	BETABAR	10.819	10.855	11.344	11.991	12.567	11.871	11.604	
	EPSILON	-0.000	-1.003	-2.737	-4.367	-5.888	-7.294	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	407.406	447.188	451.177	449.937	446.220	442.096	407.057	
	VZ-BAR	400.164	439.187	442.363	440.120	435.530	432.640	398.738	
	V-THET-BAR	76.474	84.218	88.741	93.476	97.091	90.949	81.876	
	MACH-BAR	0.370	0.407	0.411	0.410	0.406	0.402	0.369	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-2.1	-2.6	-3.2	-3.6	-4.1	-5.9	-6.7	
	OMEGABAR	0.068	0.056	0.045	0.046	0.058	0.049	0.061	
	TURNING	-10.8	-10.9	-11.3	-12.0	-12.6	-11.9	-11.6	
ROTOR LEADING EDGE	DIAMETER	16.500	16.986	17.958	18.930	19.902	20.874	21.360	
	P-TOTAL	14.324	14.622	14.662	14.666	14.653	14.641	14.393	14.637
WCOR=38.588	I-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=10446.1	P-STATIC	11.737	11.728	11.715	11.709	11.713	11.725	11.730	
	BETABAR	7.485	7.909	8.362	8.885	9.335	8.846	8.312	
	EPSILON	-0.000	-0.840	-2.502	-4.275	-5.961	-7.066	-7.241	
	K-BAR	0.959	0.959	0.959	0.959	0.959	0.959	0.959	
	V-BAR	587.070	616.859	622.055	623.123	621.432	619.039	594.879	
	VZ-BAR	582.068	610.990	615.442	615.645	613.203	611.676	588.631	
	V-THET-BAR	76.475	84.884	90.461	96.246	100.798	95.192	85.996	
	MACH-BAR	0.541	0.570	0.575	0.576	0.575	0.572	0.548	
	U-WHEEL	752.068	774.217	816.520	862.824	907.127	951.430	973.582	
	V-BAR-PR	891.756	921.137	953.336	983.194	1013.013	1052.288	1065.032	
	BETABAR-PR	49.253	48.447	49.791	51.231	52.747	54.458	56.448	
	V-THET-B-P	-675.593	-689.333	-728.058	-766.578	-806.329	-856.239	-887.586	
	MACH-BAR-P	0.822	0.851	0.881	0.909	0.937	0.973	0.982	
ROTOR TRAILING EDGE	DIAMETER	16.500	16.946	17.839	18.732	19.625	20.518	20.965	
	P-TOTAL	22.122	21.735	21.229	20.938	20.456	19.790	19.433	20.824
ROTOR	I-TOTAL	594.89	591.09	583.06	581.06	578.54	578.66	578.87	582.40
	P-STATIC	13.581	13.786	14.133	14.414	14.650	14.855	14.957	
PR = 1.4228	BETABAR	45.264	44.163	40.311	39.734	39.410	40.592	41.144	
TR = 1.1228	EPSILON	-0.000	-0.789	-2.218	-3.910	-5.535	-6.822	-7.367	
EFF-A = 0.8614	K-BAR	0.917	0.917	0.917	0.917	0.917	0.917	0.917	
EFF-P = 0.8698	V-BAR	964.316	930.588	876.750	840.418	795.106	739.544	707.925	
	VZ-BAR	678.665	667.521	668.524	646.290	614.322	581.590	533.114	
	V-THET-BAR	685.069	648.360	567.217	537.219	504.779	481.186	465.779	
	MACH-BAR	0.865	0.833	0.785	0.750	0.707	0.683	0.644	
	U-WHEEL	752.067	772.416	813.119	853.821	894.524	935.227	955.578	
	V-BAR-PR	681.963	679.084	712.408	719.700	727.545	722.221	723.956	
	BETABAR-PR	5.638	10.525	20.190	26.099	32.392	38.955	42.575	
	V-THET-B-P	-66.947	-124.056	-245.902	-316.602	-389.745	-454.041	-489.794	
	MACH-BAR-P	0.611	0.608	0.638	0.642	0.647	0.638	0.637	
	D-FACTOR	0.474	0.483	0.442	0.447	0.449	0.474	0.478	
	TURNING	43.6	37.9	29.6	25.1	20.4	15.5	13.9	
	INCID-M	-8.4	-7.8	-5.5	-4.3	-4.1	-4.1	-4.6	
	DEVIATION	18.0	14.6	11.5	8.0	7.0	7.4	8.0	
	OMEGABAR-P	0.123	0.156	0.096	0.096	0.107	0.106	0.172	
	LOSS PAR	0.043	0.055	0.034	0.034	0.038	0.057	0.057	
	PT-RATIO	1.544	1.486	1.448	1.428	1.396	1.354	1.350	1.4228
	EFF-AU	0.900	0.859	0.900	0.891	0.867	0.782	0.772	0.8614
	EFF-POLY	0.906	0.866	0.904	0.896	0.873	0.791	0.782	0.8698
STATOR LEADING EDGE	DIAMETER	16.500	16.930	17.790	18.650	19.510	20.370	20.800	
	P-TOTAL	22.122	21.741	21.238	20.948	20.476	19.803	19.433	20.824
	I-TOTAL	594.89	591.16	583.22	581.08	578.58	578.65	578.87	582.40
	P-STATIC	12.878	13.042	13.337	13.586	13.814	13.986	14.043	
	BETABAR	42.619	41.393	37.593	36.767	36.214	36.720	36.726	
	EPSILON	-0.000	-0.694	-2.241	-3.818	-5.185	-6.675	-7.358	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	1011.741	982.154	933.853	901.236	859.767	810.861	785.087	
	VZ-BAR	744.513	736.755	739.916	721.961	693.672	649.958	629.251	
	V-THET-BAR	685.069	649.436	569.705	539.443	507.955	484.820	469.473	
	MACH-BAR	0.914	0.886	0.843	0.811	0.771	0.723	0.697	
STATOR TRAILING EDGE	DIAMETER	16.500	16.886	17.658	18.430	19.202	19.974	20.360	
	P-TOTAL	18.659	18.969	19.630	19.786	19.265	18.704	18.424	19.271
ROTOR PLUS STATOR	I-TOTAL	594.89	591.20	583.32	581.10	578.64	578.64	578.87	582.40
	P-STATIC	13.365	13.381	13.390	13.356	13.285	13.197	13.151	
PR = 1.3165	BETABAR	15.446	14.163	11.489	11.265	11.395	12.008	11.782	
TR = 1.1228	EPSILON	-0.000	-0.616	-1.797	-2.966	-4.161	-5.467	-6.309	
EFF-A = 0.6657	K-BAR	0.885	0.885	0.885	0.885	0.885	0.885	0.885	
EFF-P = 0.6784	V-BAR	806.175	820.883	851.793	861.047	836.821	811.930	799.164	
	VZ-BAR	777.059	795.924	834.670	844.460	820.328	794.165	782.385	
	V-THET-BAR	214.703	200.827	169.640	168.194	165.324	168.917	162.900	
IGV,ROTOR,STATOR	MACH-BAR	0.707	0.724	0.760	0.771	0.748	0.724	0.711	
	EFF-POLY	0.179	0.158	0.048	-0.425	-1.748	58.348	5.336	
PR = 1.3113	INCID-M	-13.0	-11.2	-13.2	-13.7	-15.4	-17.2	-17.2	
TR = 1.1228	DEVIATION	14.6	12.8	10.6	10.9	12.1	14.1	14.9	
EFF-A = 0.6589	OMEGA-BAR	0.375	0.319	0.204	0.158	0.182	0.189	0.187	
EFF-P = 0.6686	LOSS PAR	0.128	0.112	0.076	0.062	0.074	0.080	0.081	
	D-FACTOR	0.368	0.331	0.253	0.211	0.196	0.172	0.159	
	TURNING	27.2	27.2	26.1	25.5	24.8	24.7	25.0	

Table C-2. Base Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 3)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	16.500	17.135	18.406	19.677	20.948	22.219	22.855	
	P-TOTAL	14.279	14.592	14.718	14.754	14.726	14.722	14.476	14.694
WCOR=33.836	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=10507.0	P-STATIC	13.775	13.748	13.744	13.745	13.750	13.756	13.788	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.284	-3.091	-4.617	-6.078	-7.416	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	252.284	324.206	347.436	353.324	347.795	346.010	296.799	
	VZ-BAR	252.284	324.206	347.436	353.324	347.795	346.010	296.799	
	V-THET-BAR	0.000	0.000	0.001	0.000	0.000	0.001	0.000	
	MACH-BAR	0.227	0.293	0.314	0.320	0.315	0.313	0.268	
IGV TRAILING EDGE	DIAMETER	16.500	17.093	18.280	19.467	20.654	21.841	22.435	
	P-TOTAL	14.232	14.528	14.666	14.706	14.691	14.672	14.424	14.646
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.402	13.428	13.445	13.456	13.464	13.474	13.460	
	BETABAR	10.688	10.870	11.578	12.218	12.577	13.839	14.727	
	EPSILON	-0.000	-1.160	-2.948	-4.497	-5.959	-7.314	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	325.688	372.364	390.913	395.205	391.614	387.065	349.171	
	VZ-BAR	320.038	365.882	382.959	386.254	382.216	375.829	337.701	
	V-THET-BAR	60.403	70.223	78.459	83.637	85.275	92.580	88.761	
	MACH-BAR	0.294	0.337	0.354	0.358	0.355	0.351	0.316	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-2.3	-2.6	-3.0	-3.4	-4.1	-3.9	-3.5	
	OMEGABAR	0.093	0.075	0.054	0.047	0.036	0.052	0.069	
	TURNING	-10.7	-10.9	-11.6	-12.2	-12.6	-13.8	-14.7	
ROTOR LEADING EDGE	DIAMETER	16.500	16.986	17.958	18.930	19.902	20.874	21.360	
	P-TOTAL	14.232	14.531	14.668	14.706	14.691	14.673	14.424	14.646
WCOR=33.949	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=10507.0	P-STATIC	12.519	12.515	12.506	12.503	12.510	12.522	12.525	
	BETABAR	7.331	7.991	8.762	9.336	9.640	10.620	10.830	
	EPSILON	-0.000	-0.886	-2.607	-4.494	-6.320	-7.407	-7.241	
	K-BAR	0.955	0.955	0.955	0.955	0.955	0.955	0.955	
	V-BAR	473.406	510.293	526.846	531.318	528.894	525.304	496.198	
	VZ-BAR	469.537	505.337	520.697	524.280	521.426	516.306	487.361	
	V-THET-BAR	60.403	70.943	80.258	86.193	88.566	90.812	93.229	
	MACH-BAR	0.432	0.467	0.483	0.487	0.485	0.481	0.455	
	U-WHEEL	756.452	776.730	823.292	867.854	912.415	956.978	979.258	
	W-BAR-PR	639.614	869.673	907.318	941.206	974.998	1003.230	1011.221	
	BETABAR-PR	55.997	54.474	54.978	56.149	57.669	59.026	61.187	
	V-THET-B-P	-696.049	-707.787	-743.033	-781.660	-823.849	-860.166	-886.029	
	MACH-BAR-P	0.766	0.796	0.831	0.863	0.893	0.919	0.924	
ROTOR TRAILING EDGE	DIAMETER	16.500	16.946	17.839	18.732	19.625	20.518	20.965	
	P-TOTAL	23.448	23.276	23.053	22.943	22.583	21.862	21.442	22.754
ROTOR	T-TOTAL	605.14	600.92	592.02	589.46	589.40	592.77	594.60	592.73
PR = 1.5537	P-STATIC	15.421	15.681	16.124	16.467	16.747	16.998	17.131	
TR = 1.1427	BETABAR	55.560	53.691	48.299	46.810	47.796	54.512	58.736	
EFF-A = 0.9410	EPSILON	-0.000	-0.922	-2.481	-4.073	-5.701	-6.936	-7.367	
EFF-P = 0.9437	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	905.752	877.680	830.997	800.157	781.387	702.792	666.101	
	VZ-BAR	512.241	519.608	552.760	547.643	511.490	408.066	345.692	
	V-THET-BAR	746.990	707.264	620.451	583.386	563.958	572.031	569.375	
	MACH-BAR	0.797	0.773	0.733	0.705	0.668	0.610	0.575	
	U-WHEEL	756.451	776.919	817.859	858.799	899.739	940.679	961.149	
	W-BAR-PR	512.329	524.485	587.062	613.003	611.911	550.125	522.484	
	BETABAR-PR	1.058	7.614	19.041	26.698	33.290	42.119	48.576	
	V-THET-B-P	-9.460	-69.655	-197.409	-275.413	-335.780	-368.649	-391.774	
	MACH-BAR-P	0.451	0.462	0.518	0.540	0.537	0.478	0.451	
	U-FACTOR	0.676	0.660	0.579	0.560	0.577	0.627	0.692	
	TURNING	54.9	46.9	35.3	29.5	24.4	16.9	12.6	
	INCID-M	-1.6	-1.8	-0.3	0.6	0.9	0.5	2.1	
	DEVIATION	13.5	11.7	11.0	8.6	7.9	10.6	14.0	
	OMEGABAR-P	0.123	0.126	0.030	0.007	0.042	0.148	0.181	
	LOSS PAR	0.043	0.045	0.011	0.003	0.015	0.048	0.054	
	PT-RATIO	1.648	1.602	1.571	1.560	1.537	1.494	1.487	1.5537
	EFF-AD	0.926	0.909	0.974	0.993	0.958	0.851	0.820	0.9410
	EFF-POLY	0.926	0.915	0.976	0.994	0.961	0.859	0.829	0.9437
STATOR LEADING EDGE	DIAMETER	16.500	16.930	17.790	18.650	19.510	20.370	20.800	
	P-TOTAL	23.448	23.278	23.056	22.946	22.605	21.884	21.442	22.754
	T-TOTAL	605.14	600.96	592.16	589.48	589.33	592.67	594.60	592.73
	P-STATIC	15.015	15.243	15.629	15.969	16.282	16.548	16.664	
	BETABAR	53.245	51.343	46.075	44.571	45.353	51.143	54.543	
	EPSILON	-0.000	-0.964	-2.591	-4.092	-5.360	-6.499	-7.356	
	K-BAR	0.874	0.874	0.874	0.874	0.874	0.874	0.874	
	V-BAR	932.342	906.953	864.853	834.769	795.892	739.183	704.550	
	VZ-BAR	557.913	566.442	599.909	594.672	559.512	463.787	408.705	
	V-THET-BAR	746.990	708.229	622.913	585.837	566.209	575.492	573.891	
	MACH-BAR	0.824	0.802	0.706	0.739	0.701	0.645	0.611	
STATOR TRAILING EDGE	DIAMETER	16.500	16.886	17.658	18.430	19.202	19.974	20.360	
	P-TOTAL	22.173	22.282	22.523	22.333	21.945	21.381	21.089	22.087
ROTOR PLUS STATOR	T-TOTAL	605.14	600.82	592.01	589.48	589.25	592.49	594.60	592.73
PR = 1.5081	P-STATIC	18.873	18.880	18.875	18.842	18.792	18.731	18.699	
TR = 1.1427	BETABAR	14.608	13.772	12.031	10.948	10.227	8.019	6.838	
EFF-A = 0.8727	EPSILON	-0.000	-0.740	-1.980	-3.015	-3.984	-5.295	-6.309	
EFF-P = 0.8799	K-BAR	0.884	0.884	0.884	0.884	0.884	0.884	0.884	
	V-BAR	571.919	577.646	591.722	579.406	554.064	513.898	491.291	
	VZ-BAR	553.432	561.036	578.724	568.862	545.201	508.870	487.796	
IGV,ROTOR,STATOR	V-THET-BAR	144.238	137.512	123.330	110.041	98.366	71.696	58.496	
PR = 1.5031	MACH-BAR	0.485	0.492	0.509	0.499	0.478	0.439	0.418	
TR = 1.1427	EFF-POLY	0.882	0.832	0.892	0.857	0.829	0.847	0.873	
EFF-A = 0.8669	INCID-M	-2.3	-1.3	-4.7	-5.9	-6.2	-2.7	0.6	
EFF-P = 0.8728	DEVIATION	13.8	12.4	11.2	10.6	10.9	10.1	10.0	
	OMEGA-BAR	0.121	0.124	0.072	0.088	0.104	0.094	0.074	
	LOSS PAR	0.052	0.044	0.027	0.034	0.043	0.040	0.032	
	D-FACTOR	0.616	0.592	0.537	0.535	0.552	0.605	0.631	
	TURNING	38.6	37.6	34.0	33.6	35.1	43.1	47.7	

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Table C-2. Base Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 4)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	16.500	17.135	18.406	19.677	20.948	22.219	22.855	
	P-TOTAL	14.390	14.698	14.709	14.719	14.695	14.713	14.462	14.694
WCOR=30.313	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=10477.9	P-STATIC	13.963	13.944	13.944	13.945	13.950	13.954	13.969	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.134	-2.857	-4.475	-5.987	-7.380	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	230.963	305.130	307.235	308.866	303.232	305.870	247.878	
	VZ-BAR	230.963	305.130	307.235	308.866	303.232	305.870	247.878	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.000	0.001	0.000	
	MACH-BAR	0.208	0.275	0.277	0.279	0.274	0.276	0.223	
IGV TRAILING EDGE	DIAMETER	16.500	17.093	18.280	19.467	20.654	21.841	22.435	
	P-TOTAL	14.345	14.642	14.677	14.676	14.671	14.664	14.416	14.654
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.684	13.710	13.718	13.724	13.731	13.739	13.723	
	BETABAR	10.289	10.447	11.201	11.925	12.206	13.208	14.020	
	EPSILON	-0.000	-1.053	-2.777	-4.392	-5.904	-7.297	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	288.899	340.587	345.160	343.933	341.742	339.024	295.100	
	VZ-BAR	284.253	334.940	338.585	336.510	334.017	330.056	286.309	
	V-THET-BAR	51.603	61.760	67.044	71.067	72.250	77.459	71.492	
	MACH-BAR	0.260	0.308	0.312	0.311	0.309	0.306	0.266	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-2.7	-3.1	-3.4	-3.7	-4.5	-4.5	-4.2	
	OMEGABAR	0.105	0.074	0.042	0.056	0.032	0.064	0.093	
	TURNING	-10.3	-10.4	-11.2	-11.9	-12.2	-13.2	-14.0	
ROTOR LEADING EDGE	DIAMETER	16.500	16.986	17.958	18.930	19.902	20.874	21.360	
	P-TOTAL	14.345	14.644	14.676	14.676	14.671	14.666	14.416	14.654
WCOR=30.396	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=10477.9	P-STATIC	12.984	12.980	12.973	12.972	12.980	12.992	12.994	
	BETABAR	7.087	7.796	8.465	9.062	9.326	10.130	10.133	
	EPSILON	-0.000	-0.911	-2.721	-4.888	-6.993	-7.947	-7.241	
	K-BAR	0.946	0.946	0.946	0.946	0.946	0.946	0.946	
	V-BAR	418.248	459.544	464.438	464.561	462.848	460.554	426.821	
	VZ-BAR	415.052	455.296	459.377	458.762	456.730	453.375	420.164	
	V-THET-BAR	51.603	62.338	68.370	73.169	75.003	80.997	75.090	
	MACH-BAR	0.386	0.419	0.423	0.423	0.422	0.420	0.388	
	U-WHEEL	754.357	776.573	821.012	865.450	909.888	954.326	976.545	
	V-BAR-PR	816.168	847.011	881.764	915.521	951.653	984.005	994.564	
	BETABAR-PR	59.434	57.484	58.601	59.927	61.318	62.564	65.010	
	V-THET-B-P	-702.753	-714.235	-752.642	-792.280	-834.885	-873.329	-901.455	
	MACH-BAR-P	0.741	0.772	0.804	0.834	0.867	0.897	0.904	
ROTOR TRAILING EDGE	DIAMETER	16.500	16.946	17.839	18.732	19.625	20.518	20.965	
	P-TOTAL	23.800	23.628	23.507	23.544	22.978	22.232	22.154	23.227
ROTOR	T-TOTAL	605.91	602.58	595.47	595.02	595.99	601.30	603.96	597.84
PR = 1.5850	P-STATIC	15.916	16.178	16.628	16.983	17.277	17.559	17.716	
IR = 1.1526	BETABAR	57.068	55.884	50.705	49.959	52.868	63.040	65.703	
EFF-A = 0.9231	EPSILON	-0.000	-0.876	-2.264	-4.065	-5.812	-6.910	-7.367	
EFF-P = 0.9267	K-BAR	0.892	0.892	0.892	0.892	0.892	0.892	0.892	
	V-BAR	839.083	861.654	820.824	798.062	748.426	686.149	670.335	
	VZ-BAR	483.343	483.229	519.817	513.423	451.810	311.147	275.824	
	V-THET-BAR	746.222	713.362	635.233	610.982	596.621	611.292	610.958	
	MACH-BAR	0.780	0.756	0.721	0.699	0.651	0.590	0.574	
	U-WHEEL	754.356	774.767	815.594	856.420	897.247	938.074	958.486	
	V-BAR-PR	485.412	487.261	550.259	569.113	542.745	451.555	443.683	
	BETABAR-PR	0.964	7.229	19.130	25.550	33.648	46.450	51.562	
	V-THET-B-P	-8.133	-61.405	-180.361	-245.438	-300.625	-326.782	-347.528	
	MACH-BAR-P	0.424	0.427	0.483	0.499	0.472	0.389	0.380	
	D-FACTOR	0.705	0.701	0.620	0.614	0.660	0.776	0.792	
	TURNING	58.5	50.3	39.5	34.4	27.7	16.1	13.4	
	INCID-M	1.8	1.2	3.3	4.4	4.5	4.0	6.0	
	DEVIATION	13.4	11.3	10.4	7.5	8.3	14.9	17.0	
	OMEGABAR-P	0.121	0.139	0.053	0.020	0.094	0.223	0.234	
	LOSS PAR	0.042	0.050	0.012	0.007	0.033	0.068	0.065	
	PT-RATIO	1.659	1.613	1.602	1.604	1.564	1.521	1.537	1.5850
	EFF-AD	0.925	0.905	0.974	0.983	0.915	0.800	0.794	0.9231
	EFF-POLY	0.931	0.911	0.976	0.984	0.920	0.811	0.806	0.9267
STATOR LEADING EDGE	DIAMETER	16.500	16.930	17.790	18.650	19.510	20.370	20.800	
	P-TOTAL	23.800	23.630	23.507	23.552	23.019	22.247	22.152	23.227
	T-TOTAL	605.91	602.62	595.60	594.98	595.86	601.09	603.96	597.84
	P-STATIC	15.529	15.764	16.178	16.548	16.890	17.192	17.333	
	BETABAR	54.702	53.452	48.532	47.774	50.280	59.139	61.496	
	EPSILON	-0.000	-0.872	-2.528	-3.874	-5.131	-6.462	-7.058	
	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
	V-BAR	914.312	889.195	851.169	828.045	778.382	716.006	700.785	
	VZ-BAR	528.316	529.459	563.610	556.493	497.442	367.324	334.491	
	V-THET-BAR	746.222	714.341	637.800	613.166	598.628	614.429	615.805	
	MACH-BAR	0.805	0.783	0.750	0.728	0.680	0.618	0.602	
STATOR TRAILING EDGE	DIAMETER	16.500	16.886	17.658	18.430	19.202	19.974	20.360	
	P-TOTAL	22.335	22.377	22.473	22.396	21.996	21.718	21.585	22.187
ROTOR PLUS STATOR	T-TOTAL	605.91	602.64	595.80	594.89	595.55	600.39	603.96	597.84
PR = 1.5140	P-STATIC	19.564	19.572	19.573	19.551	19.510	19.466	19.444	
TR = 1.1526	BETABAR	17.385	15.771	12.500	7.639	5.479	8.716	10.586	
EFF-A = 0.8246	EPSILON	-0.000	-0.618	-1.635	-2.462	-3.325	-4.845	-6.309	
EFF-P = 0.8346	K-BAR	0.862	0.862	0.862	0.862	0.862	0.862	0.862	
	V-BAR	519.925	521.361	526.404	521.629	490.930	471.287	461.932	
	VZ-BAR	496.174	501.727	513.913	516.981	488.687	465.844	454.070	
IGV,ROTOR,STATOR	V-THET-BAR	155.351	141.696	113.928	69.347	46.878	71.413	84.864	
	MACH-BAR	0.439	0.442	0.449	0.445	0.418	0.399	0.389	
	EFF-POLY	0.783	0.798	0.804	0.769	0.767	0.860	0.614	
PR = 1.5099	INCID-M	-0.9	0.8	-2.3	-2.7	-1.3	5.3	7.6	
TR = 1.1526	DEVIATION	16.6	14.4	11.6	7.3	6.2	10.8	13.7	
EFF-A = 0.8202	OMEGA-BAR	0.177	0.159	0.141	0.165	0.167	0.105	0.116	
EFF-P = 0.8291	LOSS PAR	0.060	0.056	0.053	0.065	0.069	0.045	0.051	
	D-FACTOR	0.661	0.648	0.619	0.634	0.669	0.675	0.681	
	TURNING	37.3	37.7	36.0	40.1	44.8	50.4	50.9	

Table C-2. Base Stage Blade Element Performance — U.S. Customary Units (Continued).

(Data Point No. 5)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	16.500	17.135	18.406	19.677	20.948	22.219	22.855	
	P-TOTAL	14.382	14.686	14.716	14.712	14.726	14.690	14.439	14.694
WCOR=35.773	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR= 8897.4	P-STATIC	13.642	13.624	13.625	13.628	13.633	13.641	13.659	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.037	-2.794	-4.452	-5.997	-7.407	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	305.685	363.626	368.440	367.134	368.600	361.177	313.353	
	VZ-BAR	305.685	363.626	368.440	367.134	368.600	361.177	313.353	
	V-THET-BAR	0.000	0.001	0.000	0.001	0.001	0.001	0.000	
	MACH-BAR	0.276	0.329	0.334	0.332	0.334	0.327	0.283	
IGV TRAILING EDGE	DIAMETER	16.500	17.093	18.280	19.467	20.654	21.841	22.435	
	P-TOTAL	14.324	14.621	14.665	14.670	14.687	14.652	14.404	14.648
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.277	13.286	13.295	13.306	13.318	13.331	13.334	
	BETABAR	9.769	10.416	12.242	11.665	12.438	14.544	15.946	
	EPSILON	-0.000	-0.993	-2.731	-4.374	-5.906	-7.303	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	365.689	409.996	414.920	413.983	414.492	407.420	366.723	
	VZ-BAR	360.386	403.237	405.483	405.432	404.762	394.364	354.533	
	V-THET-BAR	62.049	74.129	87.978	83.705	89.270	102.304	101.309	
	MACH-BAR	0.331	0.372	0.377	0.376	0.376	0.370	0.334	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-3.2	-3.1	-2.3	-4.0	-4.3	-3.2	-2.3	
	OMEGABAR	0.079	0.062	0.047	0.039	0.036	0.036	0.045	
	TURNING	-9.8	-10.4	-12.2	-11.7	-12.4	-14.5	-15.9	
ROTOR LEADING EDGE	DIAMETER	16.500	16.986	17.958	18.930	19.902	20.874	21.360	
	P-TOTAL	14.324	14.622	14.664	14.670	14.687	14.653	14.404	14.648
WCOR=35.886	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR= 8897.4	P-STATIC	12.247	12.241	12.232	12.228	12.232	12.243	12.248	
	BETABAR	6.824	7.741	9.208	8.810	9.480	11.047	11.556	
	EPSILON	-0.000	-0.821	-2.477	-4.275	-5.972	-7.102	-7.241	
	K-BAR	0.961	0.961	0.961	0.961	0.961	0.961	0.961	
	V-BAR	522.217	555.421	560.949	561.987	563.181	558.398	531.103	
	VZ-BAR	518.517	550.357	553.718	555.357	555.487	548.050	520.334	
	V-THET-BAR	62.049	74.814	89.765	86.067	92.759	106.992	106.408	
	MACH-BAR	0.478	0.510	0.515	0.516	0.518	0.513	0.487	
	U-WHEEL	640.569	659.434	697.169	734.904	772.639	810.375	829.242	
	W-BAR-PR	776.881	802.916	821.919	854.062	877.956	891.693	890.638	
	BETABAR-PR	48.131	46.729	47.647	49.438	50.750	52.075	54.252	
	V-THET-B-P	-578.519	-584.620	-607.404	-648.837	-679.880	-703.382	-722.834	
	MACH-BAR-P	0.711	0.737	0.755	0.785	0.807	0.819	0.816	
ROTOR TRAILING EDGE	DIAMETER	16.500	16.940	17.839	18.732	19.625	20.518	20.965	
	P-TOTAL	20.022	19.812	19.585	19.442	19.047	18.317	17.735	19.236
ROTOR	T-TOTAL	574.64	571.23	564.02	562.93	561.76	561.29	561.29	564.17
------	P-STATIC	13.527	13.680	13.942	14.155	14.331	14.490	14.569	
PR = 1.3132	BETABAR	43.284	41.944	37.707	36.188	36.938	40.699	44.131	
TR = 1.0877	EPSILON	-0.000	-0.704	-2.240	-3.947	-5.567	-6.858	-7.367	
EFF-A = 0.9228	K-BAR	0.921	0.921	0.921	0.921	0.921	0.921	0.921	
EFF-P = 0.9265	V-BAR	855.424	830.107	791.833	765.603	725.780	660.808	606.940	
	VZ-BAR	622.717	617.388	626.424	617.907	580.110	501.021	435.635	
	V-THET-BAR	586.493	554.854	484.313	452.038	436.147	430.817	422.604	
	MACH-BAR	0.770	0.747	0.714	0.689	0.650	0.588	0.537	
	U-WHEEL	640.569	659.900	692.569	727.237	761.905	796.573	813.907	
	W-BAR-PR	625.061	626.046	660.209	676.437	665.333	620.407	585.569	
	BETABAR-PR	4.963	9.471	18.384	24.007	29.318	36.140	41.931	
	V-THET-B-P	-54.074	-103.046	-208.255	-275.199	-325.758	-365.755	-391.298	
	MACH-BAR-P	0.562	0.563	0.595	0.608	0.596	0.552	0.518	
	D-FACTOR	0.431	0.435	0.378	0.381	0.405	0.461	0.499	
	TURNING	43.2	37.3	29.3	25.4	21.4	15.9	12.3	
	INCID-M	-9.5	-9.5	-7.6	-6.1	-6.1	-6.5	-4.8	
	DEVIATION	17.4	13.6	9.7	5.9	3.9	4.6	7.3	
	OMEGABAR-P	0.081	0.110	0.011	0.014	0.054	0.138	0.183	
	LOSS PAR	0.028	0.039	0.004	0.005	0.020	0.049	0.061	
	PT-RATIO	1.398	1.355	1.336	1.325	1.297	1.252	1.231	1.3132
	EFF-AD	0.932	0.895	0.988	0.983	0.929	0.809	0.747	0.9228
	EFF-POLY	0.934	0.899	0.987	0.983	0.931	0.814	0.753	0.9265
STATOR LEADING EDGE	DIAMETER	16.500	16.930	17.790	18.650	19.510	20.370	20.800	
	P-TOTAL	20.022	19.816	19.589	19.447	19.064	18.337	17.735	19.236
	T-TOTAL	574.64	571.29	564.15	562.93	561.79	561.30	561.29	564.17
	P-STATIC	12.963	13.090	13.310	13.503	13.684	13.827	13.876	
	BETABAR	46.778	39.405	35.304	33.710	34.139	36.890	39.078	
	EPSILON	-0.000	-0.734	-2.299	-3.858	-5.287	-6.672	-7.356	
	K-BAR	0.884	0.884	0.884	0.884	0.884	0.884	0.884	
	V-BAR	897.973	875.554	841.679	818.081	781.033	722.774	675.721	
	VZ-BAR	679.986	676.467	686.859	680.527	646.446	578.078	524.552	
	V-THET-BAR	586.493	555.816	486.425	454.025	438.314	433.837	425.961	
	MACH-BAR	0.813	0.793	0.764	0.741	0.705	0.648	0.602	
STATOR TRAILING EDGE	DIAMETER	16.500	16.886	17.658	18.430	19.202	19.974	20.360	
	P-TOTAL	18.068	18.303	18.808	18.770	18.396	17.796	17.484	18.409
ROTOR PLUS STATOR	T-TOTAL	574.64	571.28	564.18	562.92	561.82	561.30	561.29	564.17
----------	P-STATIC	13.671	13.688	13.702	13.663	13.585	13.485	13.430	
PR = 1.2568	BETABAR	13.268	12.222	9.986	10.142	10.637	9.411	8.725	
TR = 1.0877	EPSILON	-0.000	-0.649	-1.852	-3.010	-4.177	-5.465	-6.309	
EFF-A = 0.7697	K-BAR	0.887	0.887	0.887	0.887	0.887	0.887	0.887	
EFF-P = 0.7770	V-BAR	727.095	739.378	765.734	765.929	748.286	716.809	699.640	
	VZ-BAR	707.687	722.615	754.130	753.960	735.427	707.101	691.543	
	V-THET-BAR	166.872	156.507	132.774	134.872	138.127	117.212	106.134	
IGV,ROTOR,STATOR	MACH-BAR	0.644	0.658	0.688	0.689	0.672	0.642	0.625	
----------	EFF-POLY	0.341	0.359	0.414	0.248	-0.252	-5.099	1.778	
PR = 1.2528	INCID-M	-14.8	-13.2	-15.5	-16.8	-17.4	-17.0	-14.8	
TR = 1.0877	DEVIATION	12.5	10.8	9.1	9.8	11.4	11.5	11.4	
EFF-A = 0.7644	OMEGA-BAR	0.277	0.225	0.124	0.114	0.124	0.120	0.065	
EFF-P = 0.7663	LOSS PAR	0.096	0.080	0.047	0.045	0.051	0.051	0.028	
	D-FACTOR	0.356	0.322	0.252	0.221	0.205	0.203	0.178	
	TURNING	27.5	27.2	25.3	23.6	23.5	27.5	30.4	

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Table C-2. Base Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 6)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	16.500	17.135	18.406	19.677	20.948	22.219	22.855	
	P-TOTAL	14.387	14.692	14.706	14.707	14.713	14.709	14.459	14.693
WCOR=30.535	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR= 8900.7	P-STATIC	13.952	13.931	13.931	13.934	13.937	13.942	13.958	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.062	-2.812	-4.471	-6.002	-7.391	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	233.274	306.531	309.142	308.941	309.431	307.560	249.899	
	VZ-BAR	233.274	306.531	309.142	308.941	309.431	307.560	249.899	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.001	0.000	
	MACH-BAR	0.210	0.277	0.279	0.279	0.279	0.278	0.225	
IGV TRAILING EDGE	DIAMETER	16.500	17.093	18.280	19.467	20.654	21.841	22.435	
	P-TOTAL	14.346	14.643	14.676	14.677	14.676	14.668	14.420	14.656
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.671	13.698	13.705	13.712	13.719	13.727	13.711	
	BETABAR	10.879	10.902	11.384	12.011	12.451	12.758	13.131	
	EPSILON	-0.000	-1.013	-2.747	-4.393	-5.916	-7.291	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	292.071	343.068	347.391	346.375	344.743	341.898	298.516	
	VZ-BAR	286.822	336.876	340.557	338.791	336.635	333.457	290.711	
	V-THET-BAR	55.125	64.884	68.566	72.082	74.325	75.503	67.815	
	MACH-BAR	0.263	0.310	0.314	0.313	0.312	0.309	0.269	
	INLID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-2.1	-2.6	-3.2	-3.6	-4.2	-5.0	-5.1	
	OMEGABAR	0.093	0.064	0.038	0.039	0.049	0.053	0.076	
	TURNING	-10.9	-10.9	-11.4	-12.0	-12.5	-12.8	-13.1	
ROTOR LEADING EDGE	DIAMETER	16.500	16.986	17.958	18.930	19.902	20.874	21.360	
	P-TOTAL	14.346	14.645	14.676	14.677	14.675	14.669	14.420	14.656
WCOR=30.612	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR= 8900.7	P-STATIC	13.038	13.038	13.033	13.031	13.035	13.042	13.043	
	BETABAR	7.732	8.338	8.818	9.361	9.752	10.029	9.768	
	EPSILON	-0.000	-0.839	-2.509	-4.323	-5.996	-7.092	-7.241	
	K-BAR	0.967	0.967	0.967	0.967	0.967	0.967	0.967	
	V-BAR	409.742	451.161	455.845	456.344	455.573	453.675	419.823	
	VZ-BAR	406.017	446.392	450.556	450.267	448.990	446.743	413.737	
	V-THET-BAR	55.125	65.425	69.890	74.224	77.168	79.004	71.228	
	MACH-BAR	0.372	0.411	0.415	0.416	0.415	0.413	0.381	
	U-WHEEL	640.806	659.678	697.427	735.177	772.926	810.675	829.550	
	V-BAR-PR	712.651	743.238	772.538	799.752	828.056	857.284	863.846	
	BETABAR-PR	55.269	53.087	54.322	55.735	57.164	58.592	61.383	
	V-THET-B-P	-585.681	-594.253	-627.538	-660.953	-695.758	-731.671	-758.322	
	MACH-BAR-P	0.647	0.677	0.704	0.728	0.754	0.781	0.785	
ROTOR TRAILING EDGE	DIAMETER	16.500	16.946	17.839	18.732	19.625	20.518	20.965	
	P-TOTAL	20.632	20.462	20.143	19.846	19.653	19.262	18.977	19.871
ROTOR	T-TOTAL	579.39	575.90	568.56	566.80	566.49	567.63	568.25	569.00
	P-STATIC	14.924	15.098	15.384	15.601	15.788	15.958	16.041	
PR = 1.3558	BETABAR	52.699	50.795	44.985	44.691	45.183	48.529	50.728	
TR = 1.0970	EPSILON	-0.000	-0.784	-2.291	-3.974	-5.605	-6.867	-7.367	
EFF-A = 0.9378	K-BAR	0.933	0.933	0.933	0.933	0.933	0.933	0.933	
EFF-P = 0.9397	V-BAR	784.355	758.621	711.537	672.636	642.463	599.035	565.777	
	VZ-BAR	475.322	479.442	503.210	478.183	452.844	396.731	398.137	
	V-THET-BAR	623.925	587.850	503.014	473.054	455.727	448.807	437.997	
	MACH-BAR	0.696	0.675	0.633	0.596	0.568	0.527	0.496	
	U-WHEEL	640.805	658.144	692.825	727.507	762.188	796.869	814.209	
	V-BAR-PR	475.622	484.740	537.925	541.688	546.814	527.838	519.421	
	BETABAR-PR	2.034	8.325	20.656	28.019	34.089	41.265	46.410	
	V-THET-B-P	-16.881	-70.294	-189.611	-254.453	-306.461	-348.061	-376.212	
	MACH-BAR-P	0.422	0.430	0.478	0.480	0.483	0.464	0.455	
	D-FACTOR	0.612	0.600	0.516	0.522	0.531	0.572	0.586	
	TURNING	53.2	44.8	33.7	27.7	23.1	17.3	15.0	
	INLID-M	-2.3	-3.2	-1.0	0.2	0.4	0.1	2.3	
	DEVIATION	14.4	12.4	12.0	9.9	8.7	9.7	11.8	
	OMEGABAR-P	0.096	0.118	0.015	0.028	0.051	0.118	0.129	
	LOSS PAR	0.034	0.042	0.005	0.010	0.018	0.039	0.040	
	PT-RATIO	1.438	1.397	1.373	1.352	1.339	1.316	1.316	1.3558
	EFF-AD	0.935	0.909	0.986	0.971	0.945	0.867	0.855	0.9378
	EFF-POLY	0.938	0.913	0.986	0.972	0.946	0.871	0.860	0.9397
STATOR LEADING EDGE	DIAMETER	16.500	16.930	17.790	18.650	19.510	20.370	20.800	
	P-TOTAL	20.632	20.464	20.150	19.854	19.661	19.292	18.977	19.871
	T-TOTAL	579.39	575.97	568.69	566.81	566.47	567.61	568.25	569.00
	P-STATIC	14.739	14.899	15.169	15.365	15.543	15.681	15.735	
	BETABAR	51.377	49.497	43.845	43.230	43.541	46.224	47.738	
	EPSILON	-0.000	-0.751	-2.322	-3.930	-5.367	-6.666	-7.358	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	798.608	774.510	729.625	693.462	664.638	626.046	596.523	
	VZ-BAR	498.491	502.948	526.166	505.270	481.927	433.134	401.176	
	V-THET-BAR	623.925	588.919	505.425	474.964	457.992	452.020	441.471	
	MACH-BAR	0.710	0.689	0.650	0.616	0.589	0.552	0.524	
STATOR TRAILING EDGE	DIAMETER	16.500	16.886	17.658	18.430	19.202	19.974	20.360	
	P-TOTAL	19.773	19.773	19.779	19.645	19.390	19.060	18.889	19.521
ROTOR PLUS STATOR	T-TOTAL	579.39	575.94	568.71	566.81	566.47	567.58	568.25	569.00
	P-STATIC	17.100	17.106	17.101	17.074	17.033	16.983	16.956	
PR = 1.3319	BETABAR	15.922	14.032	10.046	8.683	9.063	8.772	8.594	
TR = 1.0970	EPSILON	-0.000	-0.670	-1.882	-2.999	-4.166	-5.459	-6.309	
EFF-A = 0.8801	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8849	V-BAR	531.866	529.684	527.395	517.177	497.426	470.206	455.297	
	VZ-BAR	511.461	513.861	519.295	511.250	491.217	464.706	450.185	
	V-THET-BAR	145.908	128.430	91.997	78.075	78.350	71.706	68.038	
IGV,ROTOR,STATOR	MACH-BAR	0.460	0.460	0.461	0.452	0.434	0.409	0.396	
	EFF-POLY	0.776	0.800	0.864	0.907	0.867	0.868	0.939	
PR = 1.3286	INCID-M	-4.2	-3.1	-7.0	-7.3	-8.0	-7.7	-6.2	
TR = 1.0970	DEVIATION	15.1	12.6	9.2	8.3	9.8	10.9	11.7	
EFF-A = 0.8746	OMEGA-BAR	0.146	0.124	0.074	0.047	0.066	0.064	0.027	
EFF-P = 0.8771	LOSS PAR	0.050	0.044	0.028	0.018	0.027	0.028	0.012	
	D-FACTOR	0.546	0.533	0.495	0.485	0.493	0.517	0.518	
	TURNING	35.5	35.5	33.8	34.5	34.5	37.5	39.1	

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Table C-2. Base Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 7)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	16.500	17.135	18.406	19.677	20.948	22.219	22.855	
	P-TOTAL	14.383	14.694	14.709	14.697	14.715	14.716	14.682	14.694
NCOR=26.110	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR= 8912.8	P-STATIC	14.154	14.143	14.143	14.144	14.147	14.150	14.157	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.227	-2.924	-4.550	-6.042	-7.325	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	169.238	260.222	263.615	260.615	264.159	263.423	194.408	
	VZ-BAR	169.238	260.222	263.615	260.615	264.159	263.423	194.408	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.001	0.001	0.000	
	MACH-BAR	0.152	0.234	0.237	0.235	0.238	0.237	0.175	
IGV TRAILING EDGE	DIAMETER	16.500	17.093	18.280	19.467	20.654	21.841	22.435	
	P-TOTAL	14.356	14.657	14.685	14.679	14.688	14.680	14.632	14.667
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.973	13.980	13.985	13.989	13.995	14.001	14.000	
	BETABAR	11.115	10.741	11.222	11.949	12.233	12.149	12.650	
	EPSILON	-0.000	-1.100	-2.810	-4.444	-5.947	-7.249	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	219.582	289.094	293.904	291.798	292.359	289.286	232.039	
	VZ-BAR	215.463	284.029	288.265	285.476	285.720	282.808	226.424	
	V-THET-BAR	42.332	53.878	57.196	60.414	61.948	60.880	50.735	
	MACH-BAR	0.197	0.261	0.265	0.263	0.264	0.261	0.209	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-1.6	-1.8	-3.3	-3.7	-4.5	-5.6	-5.6	
	OMEGABAR	0.107	0.067	0.043	0.033	0.048	0.063	0.100	
	TURNING	-11.1	-10.7	-11.2	-11.9	-12.2	-12.1	-12.0	
ROTOR LEADING EDGE	DIAMETER	16.500	16.986	17.958	18.930	19.902	20.874	21.360	
	P-TOTAL	14.358	14.659	14.684	14.679	14.688	14.682	14.632	14.667
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=26.159	P-STATIC	13.477	13.474	13.470	13.468	13.471	13.477	13.479	
NCOR= 8912.8	BETABAR	7.273	8.122	8.609	9.200	9.492	9.456	8.833	
	EPSILON	-0.000	-0.853	-2.484	-4.478	-6.347	-7.383	-7.241	
	K-BAR	0.946	0.946	0.946	0.946	0.946	0.946	0.946	
	V-BAR	334.380	385.151	389.564	389.155	389.964	388.045	347.023	
	VZ-BAR	331.690	381.267	385.175	384.149	384.625	382.772	342.908	
	V-THET-BAR	42.332	54.416	58.312	62.219	64.310	63.754	53.268	
	MACH-BAR	0.302	0.349	0.353	0.353	0.354	0.352	0.314	
	U-WHEEL	641.678	800.575	896.376	736.176	773.977	811.778	830.677	
	V-BAR-PR	685.006	716.096	747.029	775.753	807.197	840.279	849.658	
	BETABAR-PR	61.039	57.831	58.960	60.317	61.543	62.900	60.198	
	V-THET-B-P	-599.345	-606.159	-640.064	-673.957	-709.666	-748.024	-777.389	
	MACH-BAR-P	0.619	0.649	0.677	0.703	0.732	0.762	0.768	
ROTOR TRAILING EDGE	DIAMETER	16.500	16.946	17.839	18.732	19.625	20.518	20.965	
	P-TOTAL	20.615	20.568	20.563	20.571	20.343	19.938	19.672	20.405
ROTOR	T-TOTAL	580.28	577.80	572.50	572.09	572.44	576.20	578.25	574.08
------	P-STATIC	15.528	15.705	16.010	16.254	16.460	16.652	16.751	
PR = 1.3913	BETABAR	57.163	55.775	49.624	48.909	50.335	57.534	61.969	
TR = 1.1068	EPSILON	-0.000	-0.852	-2.219	-3.916	-5.615	-6.841	-7.367	
EFF-A = 0.9289	K-BAR	0.892	0.892	0.892	0.892	0.892	0.892	0.892	
EFF-P = 0.9301	V-BAR	736.359	717.534	688.956	668.826	635.416	589.196	556.456	
	VZ-BAR	399.290	403.529	446.266	459.594	405.596	316.346	262.448	
	V-THET-BAR	618.702	593.304	524.845	504.069	489.094	498.920	492.947	
	MACH-BAR	0.649	0.633	0.609	0.590	0.558	0.514	0.485	
	U-WHEEL	641.677	659.039	693.768	728.496	763.224	797.953	815.316	
	V-BAR-PR	399.950	409.016	477.241	493.570	489.597	486.888	415.693	
	BETABAR-PR	3.293	9.224	20.719	27.046	34.060	43.068	50.850	
	V-THET-B-P	-22.975	-65.735	-168.922	-224.427	-274.129	-301.035	-322.369	
	MACH-BAR-P	0.353	0.361	0.422	0.435	0.430	0.381	0.361	
	D-FACTOR	0.710	0.699	0.598	0.591	0.615	0.705	0.740	
	TURNING	57.7	48.6	38.2	33.3	27.5	19.3	15.3	
	INCID-M	3.4	1.6	3.7	4.8	4.7	4.4	7.1	
	DEVIATION	15.7	13.3	12.0	9.0	8.7	12.1	16.2	
	OMEGABAR-P	0.133	0.155	0.031	0.019	0.064	0.178	0.208	
	LOSS PAR	0.047	0.055	0.011	0.007	0.022	0.057	0.059	
	PT-RATIO	1.436	1.403	1.401	1.401	1.384	1.361	1.363	1.3913
	EFF-AD	0.917	0.892	0.975	0.984	0.940	0.831	0.807	0.9289
	EFF-POLY	0.921	0.896	0.975	0.984	0.942	0.857	0.814	0.9301
STATOR LEADING EDGE	DIAMETER	16.500	16.930	17.790	18.650	19.510	20.370	20.800	
	P-TOTAL	20.615	20.568	20.562	20.572	20.356	19.952	19.672	20.405
	T-TOTAL	580.28	577.83	572.59	572.06	572.35	576.14	578.25	574.08
	P-STATIC	15.287	15.439	15.701	15.936	16.156	16.349	16.436	
	BETABAR	54.971	53.510	47.539	46.668	47.796	53.912	57.405	
	EPSILON	-0.000	-0.526	-2.365	-3.816	-5.173	-6.483	-7.356	
	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
	V-BAR	755.568	739.062	714.289	695.466	662.850	618.754	589.741	
	VZ-BAR	433.694	439.434	482.167	477.208	445.290	364.499	317.691	
	V-THET-BAR	618.702	594.154	526.948	505.828	490.988	499.917	496.857	
	MACH-BAR	0.668	0.653	0.633	0.615	0.584	0.541	0.513	
STATOR TRAILING EDGE	DIAMETER	16.500	16.886	17.658	18.430	19.202	19.974	20.360	
	P-TOTAL	18.498	19.817	20.108	20.005	19.755	19.433	19.269	19.810
ROTOR PLUS STATOR	T-TOTAL	580.28	578.06	572.68	572.02	572.23	575.80	578.25	574.08
----------	P-STATIC	17.720	17.740	17.744	17.725	17.690	17.648	17.626	
PR = 1.3506	BETABAR	16.882	14.850	12.242	9.822	7.226	4.583	3.228	
TR = 1.1068	EPSILON	-0.000	-0.415	-1.761	-2.768	-3.804	-5.200	-6.309	
EFF-A = 0.8398	K-BAR	0.862	0.862	0.862	0.862	0.862	0.862	0.862	
EFF-P = 0.8465	V-BAR	291.709	464.128	491.366	483.249	461.954	433.476	418.606	
	VZ-BAR	279.138	448.660	480.179	476.159	458.281	432.090	417.345	
	V-THET-BAR	84.712	118.781	104.221	82.442	58.115	34.639	23.534	
IGV,ROTOR,STATOR	MACH-BAR	0.249	0.400	0.426	0.419	0.400	0.374	0.359	
----------	EFF-POLY	0.576	0.781	0.841	0.792	0.755	0.755	0.770	
PR = 1.3481	INCID-M	-0.6	0.9	-3.3	-3.8	-3.8	0.0	3.5	
TR = 1.1068	DEVIATION	16.1	13.9	11.4	9.5	7.9	6.7	6.4	
EFF-A = 0.8376	OMEGA-BAR	0.397	0.147	0.094	0.122	0.143	0.144	0.125	
EFF-P = 0.8412	LOSS PAR	0.135	0.051	0.035	0.048	0.059	0.062	0.055	
	D-FACTOR	0.865	0.608	0.540	0.550	0.579	0.630	0.651	
	TURNING	38.1	38.7	35.3	36.8	40.6	49.3	54.2	

Table C-2. Base Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 8)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	16.500	17.135	18.406	19.677	20.948	22.219	22.855	
	P-TOTAL	14.384	14.089	14.710	14.706	14.710	14.714	14.465	14.694
WCOR=30.724	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR= 7329.6	P-STATIC	13.943	13.922	13.922	13.924	13.928	13.933	13.944	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.066	-2.809	-4.462	-6.002	-7.402	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	234.906	307.819	311.925	310.614	310.772	310.451	253.750	
	VZ-BAR	234.906	307.819	311.925	310.614	310.772	310.451	253.750	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.001	0.000	
	MACH-BAR	0.211	0.278	0.282	0.280	0.280	0.280	0.228	
IGV TRAILING EDGE	DIAMETER	16.500	17.093	18.280	19.467	20.654	21.841	22.435	
	P-TOTAL	14.342	14.640	14.678	14.672	14.683	14.667	14.420	14.657
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.658	13.685	13.694	13.699	13.709	13.716	13.699	
	BETABAR	10.827	10.917	11.516	12.191	12.116	12.654	13.198	
	EPSILON	-0.000	-1.010	-2.741	-4.382	-5.911	-7.300	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	294.026	344.747	349.820	347.678	348.010	343.916	300.924	
	VZ-BAR	288.793	338.508	342.782	339.838	340.258	335.563	292.976	
	V-THET-BAR	55.229	65.290	69.816	73.418	73.044	75.436	68.705	
	MACH-BAR	0.265	0.312	0.316	0.314	0.315	0.311	0.271	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-2.1	-2.6	-3.0	-3.4	-4.6	-5.1	-5.1	
	OMEGABAR	0.094	0.064	0.041	0.044	0.045	0.060	0.087	
	TURNING	-10.8	-10.9	-11.5	-12.2	-12.1	-12.7	-13.2	
ROTOR LEADING EDGE	DIAMETER	16.500	16.986	17.958	18.930	19.902	20.874	21.360	
	P-TOTAL	14.342	14.641	14.678	14.672	14.683	14.668	14.420	14.657
WCOR=30.802	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR= 7329.6	P-STATIC	12.994	12.992	12.987	12.985	12.989	12.996	12.997	
	BETABAR	7.625	8.278	8.849	9.411	9.422	9.860	9.733	
	EPSILON	-0.000	-0.834	-2.497	-4.288	-5.957	-7.081	-7.241	
	K-BAR	0.961	0.961	0.961	0.961	0.961	0.961	0.961	
	V-BAR	416.255	457.300	462.729	462.245	463.192	460.295	420.848	
	VZ-BAR	412.574	452.535	457.221	456.023	456.944	453.497	420.704	
	V-THET-BAR	55.230	65.839	71.177	75.585	75.827	78.817	72.162	
	MACH-BAR	0.378	0.417	0.422	0.421	0.422	0.419	0.388	
	U-WHEEL	527.695	543.236	574.322	605.408	636.494	667.580	683.122	
	W-BAR-PR	627.249	657.796	679.863	699.052	723.291	743.178	741.798	
	BETABAR-PR	48.871	46.531	47.737	49.281	50.819	52.394	55.449	
	V-THET-B-P	-472.465	-477.397	-503.145	-529.823	-560.666	-588.762	-610.960	
	MACH-BAR-P	0.570	0.599	0.620	0.637	0.659	0.677	0.674	
ROTOR TRAILING EDGE	DIAMETER	16.500	16.946	17.839	18.732	19.625	20.518	20.965	
	P-TOTAL	18.085	18.051	17.949	17.773	17.519	17.103	16.612	17.672
ROTOR	T-TOTAL	557.19	554.61	549.07	548.30	547.14	546.48	546.47	549.07
	P-STATIC	13.794	13.900	14.079	14.216	14.329	14.428	14.478	
PR = 1.2057	BETABAR	44.287	42.089	36.092	35.867	35.245	36.804	39.836	
TR = 1.0585	EPSILON	-0.000	-0.776	-2.266	-3.975	-5.594	-6.850	-7.367	
EFF-A = 0.9383	K-BAR	0.921	0.921	0.921	0.921	0.921	0.921	0.921	
EFF-P = 0.9395	V-BAR	706.251	692.326	664.920	638.103	605.652	557.979	502.930	
	VZ-BAR	505.574	513.712	537.267	517.107	494.634	446.796	386.192	
	V-THET-BAR	493.138	464.051	391.696	373.865	349.503	334.212	322.171	
	MACH-BAR	0.634	0.622	0.599	0.574	0.543	0.499	0.447	
	U-WHEEL	527.694	541.972	570.532	599.091	627.651	656.210	670.490	
	W-BAR-PR	506.754	519.702	566.323	564.039	567.488	550.814	520.068	
	BETABAR-PR	3.910	8.613	18.404	23.536	29.351	35.768	42.048	
	V-THET-B-P	-34.356	-77.922	-178.836	-225.226	-278.148	-321.998	-348.319	
	MACH-BAR-P	0.455	0.467	0.510	0.507	0.509	0.492	0.463	
	D-FACTOR	0.436	0.428	0.346	0.364	0.375	0.408	0.448	
	TURNING	45.0	37.9	29.3	25.7	21.5	16.6	13.4	
	INCID-M	-8.7	-9.7	-7.5	-6.2	-6.0	-6.1	-3.6	
	DEVIATION	16.3	12.7	9.7	5.5	4.0	4.3	7.4	
	OMEGABAR-P	0.093	0.114	-0.010	0.010	0.040	0.101	0.151	
	LOSS PAR	0.032	0.041	-0.004	0.003	0.015	0.036	0.050	
	P1-RATIO	1.261	1.233	1.223	1.211	1.193	1.168	1.152	1.2057
	EFF-AD	0.924	0.891	1.013	0.988	0.944	0.847	0.772	0.9383
	EFF-POLY	0.926	0.893	1.011	0.987	0.944	0.849	0.775	0.9395
STATOR LEADING EDGE	DIAMETER	16.500	16.930	17.790	18.650	19.510	20.370	20.800	
	P-TOTAL	18.085	18.052	17.952	17.780	17.528	17.119	16.612	17.672
	T-TOTAL	557.19	554.65	549.17	548.29	547.17	546.48	546.47	549.07
	P-STATIC	13.413	13.509	13.671	13.790	13.902	13.977	13.990	
	BETABAR	41.775	39.704	34.061	33.543	32.809	33.641	35.586	
	EPSILON	-0.000	-0.794	-2.295	-3.826	-5.192	-6.572	-7.358	
	K-BAR	0.884	0.884	0.884	0.884	0.884	0.884	0.884	
	V-BAR	740.213	727.755	702.845	679.109	649.004	607.921	560.763	
	VZ-BAR	552.024	559.838	582.223	566.017	545.473	506.117	457.175	
	V-THET-BAR	493.138	464.898	393.655	375.251	351.660	336.765	324.726	
	MACH-BAR	0.667	0.657	0.636	0.613	0.585	0.546	0.501	
STATOR TRAILING EDGE	DIAMETER	16.500	16.886	17.658	18.430	19.202	19.974	20.360	
	P-TOTAL	17.296	17.382	17.571	17.505	17.204	16.823	16.628	17.291
ROTOR PLUS STATOR	T-TOTAL	557.19	554.65	549.19	548.29	547.20	546.49	546.47	549.07
	P-STATIC	14.044	14.055	14.058	14.025	13.963	13.888	13.846	
PR = 1.1797	BETABAR	14.292	12.564	8.869	8.528	8.913	7.038	5.988	
TR = 1.0585	EPSILON	-0.000	-0.643	-1.846	-2.997	-4.180	-5.469	-6.309	
EFF-A = 0.8260	K-BAR	0.887	0.887	0.887	0.887	0.887	0.887	0.887	
EFF-P = 0.8300	V-BAR	621.799	626.505	638.228	635.771	616.865	591.656	578.451	
	VZ-BAR	602.556	611.488	630.585	628.741	609.416	587.197	575.294	
	V-THET-BAR	153.494	136.264	98.394	94.281	95.571	72.496	60.344	
IGV,ROTOR,STATOR	MACH-BAR	0.553	0.559	0.573	0.572	0.554	0.531	0.518	
	EFF-POLY	0.507	0.511	0.563	0.519	0.190	-0.578	0.914	
PR = 1.1767	INCID-M	-13.8	-12.9	-16.8	-17.0	-18.8	-20.2	-18.5	
TR = 1.0585	DEVIATION	13.5	11.2	8.0	8.2	9.6	9.1	9.1	
EFF-A = 0.8162	OMEGA-BAR	0.169	0.147	0.089	0.069	0.089	0.094	-0.006	
EFF-P = 0.8172	LOSS PAR	0.058	0.052	0.033	0.027	0.037	0.041	-0.003	
	D-FACTOR	0.343	0.304	0.253	0.231	0.217	0.221	0.180	
	TURNING	27.5	27.1	25.2	25.0	23.9	26.6	29.4	

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Table C-2. Base Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 9)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	16.500	17.135	18.406	19.677	20.948	22.219	22.855	
	P-TOTAL	14.389	14.700	14.708	14.703	14.700	14.721	14.468	14.694
WCOR=25.685	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR= 7333.4	P-STATIC	14.171	14.161	14.161	14.163	14.165	14.168	14.175	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.205	-2.855	-4.462	-5.993	-7.322	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	164.940	257.232	259.119	257.618	256.127	260.179	190.635	
	VZ-BAR	164.940	257.232	259.119	257.618	256.127	260.179	190.635	
	V-THET-BAR	0.000	0.000	0.001	0.000	0.000	0.000	0.000	
	MACH-BAR	0.148	0.232	0.233	0.232	0.231	0.234	0.171	
IGV TRAILING EDGE	DIAMETER	16.500	17.093	18.280	19.467	20.654	21.841	22.435	
	P-TOTAL	14.351	14.649	14.676	14.674	14.678	14.680	14.432	14.660
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.988	13.995	14.000	14.004	14.010	14.017	14.015	
	BETABAR	11.502	11.049	11.490	12.114	12.512	12.246	12.629	
	EPSILON	-0.000	-1.081	-2.750	-4.369	-5.905	-7.254	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	213.103	284.201	288.906	287.370	287.040	285.854	227.887	
	VZ-BAR	208.823	278.932	283.116	280.970	280.223	279.350	222.374	
	V-THET-BAR	42.495	54.470	57.548	60.308	62.187	60.632	49.822	
	MACH-BAR	0.192	0.256	0.260	0.259	0.259	0.258	0.205	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-1.5	-2.5	-3.1	-3.5	-4.2	-5.5	-5.6	
	OMEGABAR	0.176	0.095	0.059	0.055	0.040	0.074	0.123	
	TURNING	-11.5	-11.0	-11.5	-12.1	-12.5	-12.2	-12.6	
ROTOR LEADING EDGE	DIAMETER	16.500	16.986	17.958	18.930	19.902	20.874	21.360	
	P-TOTAL	14.351	14.652	14.675	14.674	14.678	14.682	14.432	14.660
WCOR=25.745	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR= 7333.4	P-STATIC	13.559	13.560	13.557	13.556	13.558	13.563	13.562	
	BETABAR	7.713	8.567	9.037	9.573	9.946	9.788	9.088	
	EPSILON	-0.006	-0.793	-2.330	-4.121	-5.726	-6.803	-7.241	
	K-BAR	0.967	0.967	0.967	0.967	0.967	0.967	0.967	
	V-BAR	316.641	369.215	373.513	373.472	373.780	373.511	331.292	
	VZ-BAR	313.777	365.095	368.877	368.271	368.102	368.074	327.133	
	V-THET-BAR	42.495	55.005	58.666	62.111	64.562	63.497	54.330	
	MACH-BAR	0.286	0.334	0.338	0.338	0.339	0.338	0.299	
	U-WHEEL	527.968	543.517	574.619	605.721	636.823	667.926	683.476	
	V-BAR-PR	578.049	609.867	634.261	656.612	680.463	707.690	710.888	
	BETABAR-PR	57.124	53.227	54.436	55.884	57.244	58.660	62.602	
	V-THET-B-P	-485.473	-488.512	-515.953	-543.611	-572.261	-604.428	-631.146	
	MACH-BAR-P	0.522	0.552	0.574	0.595	0.616	0.641	0.642	
ROTOR TRAILING EDGE	DIAMETER	16.500	16.946	17.839	18.732	19.625	20.518	20.965	
	P-TOTAL	18.221	18.188	18.087	17.978	17.868	17.720	17.569	17.961
ROTOR	T-TOTAL	559.93	557.27	551.76	550.66	550.28	551.12	551.63	552.12
PR = 1.2252	P-STATIC	14.696	14.813	15.005	15.151	15.275	15.390	15.446	
TR = 1.0644	BETABAR	53.879	51.371	43.905	43.053	43.119	44.851	45.343	
EFF-A = 0.9304	EPSILON	-0.000	-0.905	-2.422	-4.041	-5.612	-6.792	-7.367	
EFF-P = 0.9294	K-BAR	0.933	0.933	0.933	0.933	0.933	0.933	0.933	
	V-BAR	633.085	617.476	586.956	561.808	538.145	511.331	489.253	
	VZ-BAR	373.198	385.355	422.840	410.528	392.814	362.510	343.880	
	V-THET-BAR	511.390	482.339	407.033	383.529	367.828	360.618	348.016	
	MACH-BAR	0.563	0.549	0.523	0.500	0.478	0.453	0.433	
	U-WHEEL	527.968	542.253	570.828	599.402	627.976	656.550	670.837	
	V-BAR-PR	373.566	390.192	453.550	463.850	471.153	467.977	471.663	
	BETABAR-PR	2.544	8.797	21.159	27.738	33.515	39.226	43.191	
	V-THET-B-P	-16.578	-59.915	-163.795	-215.873	-260.148	-295.932	-322.821	
	MACH-BAR-P	0.332	0.347	0.404	0.413	0.419	0.415	0.417	
	D-FACTOR	0.637	0.612	0.493	0.489	0.494	0.521	0.521	
	TURNING	54.6	44.4	33.3	28.1	23.7	19.4	19.4	
	INCID-M	-0.5	-3.0	-0.8	0.4	0.4	0.1	3.5	
	DEVIATION	15.0	12.9	12.5	9.7	8.1	7.7	8.6	
	OMEGABAR-P	0.168	0.182	0.035	0.028	0.044	0.094	0.075	
	LOSS PAR	0.059	0.065	0.012	0.010	0.015	0.032	0.025	
	PT-RATIO	1.270	1.241	1.233	1.225	1.217	1.208	1.217	1.2252
	EFF-AD	0.889	0.858	0.967	0.971	0.950	0.888	0.912	0.9304
	EFF-POLY	0.892	0.861	0.967	0.970	0.951	0.890	0.913	0.9294
STATOR LEADING EDGE	DIAMETER	16.500	16.930	17.790	18.650	19.510	20.370	20.800	
	P-TOTAL	18.221	18.188	18.088	17.981	17.871	17.724	17.569	17.961
	T-TOTAL	559.93	557.30	551.84	550.66	550.28	551.10	551.63	552.12
	P-STATIC	14.569	14.678	14.862	14.991	15.102	15.191	15.225	
	BETABAR	52.412	49.993	42.812	41.708	41.605	42.846	42.887	
	EPSILON	-0.000	-0.919	-2.514	-3.984	-5.366	-6.612	-7.358	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	645.357	630.789	601.601	578.720	557.140	534.222	515.430	
	VZ-BAR	393.656	405.406	441.271	432.043	416.597	391.685	377.655	
	V-THET-BAR	511.390	483.128	408.846	385.039	369.935	363.285	350.777	
	MACH-BAR	0.574	0.562	0.537	0.516	0.496	0.474	0.457	
STATOR TRAILING EDGE	DIAMETER	16.500	16.886	17.658	18.430	19.202	19.974	20.360	
	P-TOTAL	17.998	17.999	17.939	17.864	17.745	17.509	17.384	17.805
ROTOR PLUS STATOR	T-TOTAL	559.93	557.10	551.64	550.66	550.28	551.10	551.63	552.12
PR = 1.2145	P-STATIC	16.056	16.059	16.050	16.027	15.995	15.955	15.935	
TR = 1.0644	BETABAR	15.750	13.413	8.430	7.933	9.246	9.008	8.821	
EFF-A = 0.8864	EPSILON	-0.000	-0.874	-2.166	-3.238	-4.370	-5.604	-6.309	
EFF-P = 0.8895	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	464.693	463.179	455.291	449.431	439.625	416.454	403.539	
	VZ-BAR	447.246	450.525	450.356	445.130	433.913	411.318	398.766	
	V-THET-BAR	126.139	107.444	66.752	62.024	70.634	65.205	61.883	
IGV,ROTOR,STATOR	MACH-BAR	0.407	0.407	0.402	0.397	0.388	0.367	0.355	
	EFF-POLY	0.886	0.905	0.914	0.910	0.889	0.800	0.810	
PR = 1.2117	INCID-M	-3.2	-2.6	-8.0	-8.8	-10.0	-11.0	-11.0	
TR = 1.0644	DEVIATION	15.0	12.0	7.6	7.6	10.0	11.1	12.0	
EFF-A = 0.8788	OMEGA-BAR	0.061	0.054	0.046	0.039	0.045	0.085	0.079	
EFF-P = 0.8789	LOSS PAR	0.021	0.019	0.018	0.015	0.019	0.036	0.034	
	D-FACTOR	0.492	0.481	0.459	0.447	0.437	0.466	0.469	
	TURNING	36.7	36.6	34.4	33.8	32.4	33.8	34.1	

Table C-2. Base Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 10)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	16.500	17.135	18.406	19.677	20.948	22.219	22.855	
	P-TOTAL	14.390	14.708	14.708	14.705	14.700	14.716	14.460	14.695
WCOR=23.144	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR= 7319.8	P-STATIC	14.265	14.262	14.262	14.263	14.265	14.268	14.270	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.517	-3.082	-4.564	-5.955	-7.229	-8.193	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	124.402	233.627	233.619	232.554	230.933	234.256	153.358	
	VZ-BAR	124.402	233.627	233.619	232.554	230.933	234.256	153.358	
	V-THET-BAR	0.000	0.000	0.000	0.000	0.001	0.001	0.000	
	MACH-BAR	0.112	0.210	0.210	0.209	0.208	0.211	0.138	
IGV TRAILING EDGE	DIAMETER	16.500	17.093	18.280	19.467	20.654	21.841	22.435	
	P-TOTAL	14.365	14.664	14.686	14.672	14.682	14.690	14.442	14.668
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.125	14.132	14.134	14.137	14.142	14.148	14.146	
	BETABAR	11.476	10.818	11.461	12.037	12.460	13.063	14.226	
	EPSILON	-0.000	-1.172	-2.630	-4.390	-5.845	-7.179	-8.047	
	K-BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	V-BAR	172.971	255.982	260.456	256.481	257.577	257.978	191.807	
	VZ-BAR	169.514	251.432	255.263	250.842	251.510	251.302	185.925	
	V-THET-BAR	34.412	48.048	51.748	53.485	55.575	58.308	47.137	
	MACH-BAR	0.155	0.230	0.235	0.231	0.232	0.232	0.172	
	INCID-M	22.1	22.8	24.1	25.3	26.5	27.5	28.1	
	DEVIATION	-1.5	-2.7	-3.1	-3.6	-4.2	-4.7	-4.0	
	OMEGABAR	0.197	0.098	0.048	0.074	0.043	0.059	0.095	
	TURNING	-11.5	-10.8	-11.5	-12.0	-12.5	-13.1	-14.2	
ROTOR LEADING EDGE	DIAMETER	16.500	16.986	17.958	18.930	19.902	20.874	21.360	
	P-TOTAL	14.365	14.667	14.685	14.672	14.682	14.692	14.442	14.668
WCOR=23.186	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR= 7319.8	P-STATIC	13.749	13.747	13.745	13.744	13.746	13.751	13.752	
	BETABAR	7.096	8.267	8.884	9.335	9.750	10.289	9.669	
	EPSILON	-0.000	-0.931	-2.487	-4.384	-6.140	-7.088	-7.241	
	K-BAR	0.946	0.946	0.946	0.946	0.946	0.946	0.946	
	V-BAR	278.555	338.117	341.677	339.565	340.747	341.719	294.171	
	VZ-BAR	276.421	334.602	337.579	335.068	335.825	336.224	289.975	
	V-THET-BAR	34.413	48.621	52.764	55.079	57.707	61.035	49.510	
	MACH-BAR	0.251	0.306	0.309	0.307	0.308	0.309	0.265	
	U-WHEEL	526.990	542.509	573.554	604.598	635.642	666.687	682.209	
	V-BAR-PR	564.837	596.561	620.637	643.619	668.424	692.728	695.984	
	BETABAR-PR	60.700	55.883	57.047	58.627	59.840	60.963	65.377	
	V-THET-B-P	-492.576	-493.888	-520.789	-549.520	-577.936	-605.652	-632.699	
	MACH-BAR-P	0.509	0.539	0.561	0.582	0.604	0.626	0.628	
ROTOR TRAILING EDGE	DIAMETER	16.500	16.946	17.839	18.732	19.625	20.518	20.965	
	P-TOTAL	18.567	18.501	18.396	18.290	18.146	17.889	17.704	18.244
ROTOR	T-TOTAL	560.82	558.61	553.95	552.67	552.36	554.05	554.96	554.45
PR = 1.2439	P-STATIC	14.985	15.106	15.306	15.460	15.585	15.702	15.762	
TR = 1.0685	BETABAR	54.390	53.153	46.720	45.403	46.005	51.355	53.617	
EFF-A = 0.9410	EPSILON	-0.000	-0.954	-2.403	-4.054	-5.660	-6.799	-7.367	
EFF-P = 0.9405	K-BAR	0.892	0.892	0.892	0.892	0.892	0.892	0.892	
	V-BAR	632.598	614.548	583.578	557.938	531.280	493.316	466.500	
	VZ-BAR	368.339	368.454	400.035	391.736	369.032	308.103	276.716	
	V-THET-BAR	514.302	491.778	424.847	397.287	382.180	385.231	375.568	
	MACH-BAR	0.562	0.546	0.519	0.496	0.471	0.436	0.411	
	U-WHEEL	526.989	541.248	569.769	598.290	626.811	655.333	669.593	
	V-BAR-PR	368.558	371.920	425.561	440.304	442.777	409.820	403.760	
	BETABAR-PR	1.973	7.622	19.899	27.163	33.544	41.249	46.737	
	V-THET-B-P	-12.687	-49.470	-144.922	-201.003	-244.631	-270.102	-294.025	
	MACH-BAR-P	0.327	0.330	0.379	0.391	0.393	0.362	0.355	
	D-FACTOR	0.644	0.644	0.541	0.529	0.541	0.612	0.627	
	TURNING	58.7	48.3	37.1	31.5	26.3	19.7	18.6	
	INCID-M	3.1	-0.4	1.8	3.1	3.0	4.4	6.3	
	DEVIATION	14.4	11.7	11.2	9.1	8.2	9.7	12.1	
	OMEGABAR-P	0.101	0.150	0.023	0.047	0.038	0.134	0.137	
	LOSS PAR	0.035	0.053	0.008	0.003	0.013	0.044	0.042	
	PT-RATIO	1.293	1.261	1.253	1.247	1.235	1.220	1.226	1.2439
	EFF-AD	0.938	0.892	0.981	0.994	0.960	0.857	0.858	0.9410
	EFF-POLY	0.939	0.894	0.980	0.993	0.960	0.860	0.861	0.9405
STATOR LEADING EDGE	DIAMETER	16.500	16.930	17.790	18.650	19.510	20.370	20.800	
	P-TOTAL	18.567	18.501	18.397	18.293	18.153	17.897	17.704	18.244
	T-TOTAL	560.82	558.64	554.02	552.68	552.33	554.00	554.96	554.45
	P-STATIC	14.771	14.880	15.069	15.216	15.340	15.438	15.480	
	BETABAR	51.976	50.710	44.633	43.149	43.426	47.681	49.097	
	EPSILON	-0.000	-0.910	-2.519	-3.960	-5.164	-6.497	-7.358	
	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
	V-BAR	652.875	636.368	607.376	583.389	558.255	524.581	500.844	
	VZ-BAR	402.167	402.903	432.176	425.630	405.442	353.189	327.944	
	V-THET-BAR	514.302	492.510	426.716	398.976	383.747	387.854	378.547	
	MACH-BAR	0.581	0.567	0.542	0.520	0.496	0.464	0.442	
STATOR TRAILING EDGE	DIAMETER	16.500	16.886	17.658	18.430	19.202	19.974	20.360	
	P-TOTAL	18.131	18.137	18.152	18.059	17.918	17.723	17.622	17.993
ROTOR PLUS STATOR	T-TOTAL	560.82	558.54	553.94	552.68	552.31	553.92	554.96	554.45
	P-STATIC	16.296	16.300	16.295	16.277	16.251	16.219	16.201	
PR = 1.2267	BETABAR	15.867	14.380	11.218	10.889	11.329	9.507	8.484	
TR = 1.0685	EPSILON	-0.000	-0.778	-2.004	-2.976	-3.987	-5.325	-6.309	
EFF-A = 0.8772	K-BAR	0.862	0.862	0.862	0.862	0.862	0.862	0.862	
EFF-P = 0.8807	V-BAR	449.826	449.042	449.473	440.677	427.360	408.111	397.779	
	VZ-BAR	432.686	434.967	440.879	432.743	419.034	402.505	393.427	
IGV,ROTOR,STATOR	V-THET-BAR	122.988	111.515	87.442	83.247	83.950	67.409	58.683	
	MACH-BAR	0.393	0.394	0.396	0.388	0.376	0.358	0.349	
	EFF-POLY	0.804	0.824	0.857	0.837	0.815	0.842	0.906	
PR = 1.4245	INCID-M	-3.6	-1.9	-0.2	-7.4	-8.1	-8.2	-4.8	
TR = 1.0685	DEVIATION	15.1	13.0	10.4	10.5	12.0	11.6	11.6	
EFF-A = 0.8719	OMEGA-BAR	0.115	0.101	0.074	0.076	0.084	0.070	0.037	
EFF-P = 0.8728	LOSS PAR	0.039	0.036	0.028	0.030	0.034	0.030	0.016	
	D-FACTOR	0.524	0.512	0.473	0.463	0.462	0.492	0.493	
	TURNING	36.1	36.3	33.4	32.3	32.1	38.2	40.6	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units

(Data Point No. 11)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.442	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34132.0	P-STATIC	13.553	13.554	13.560	13.572	13.591	13.615	13.630	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.926	-2.631	-4.234	-5.784	-7.288	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	377.270	377.108	376.059	373.947	370.790	366.574	364.010	
	VZ-BAR	377.270	377.108	376.059	373.947	370.790	366.574	364.010	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.342	0.342	0.341	0.339	0.336	0.332	0.329	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.638	14.638	14.649	14.674	14.674	14.672	14.669	14.663
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.044	13.046	13.057	13.073	13.092	13.114	13.125	
	BETABAR	8.406	10.072	11.623	12.205	11.952	9.571	5.526	
	EPSILON	-0.000	-0.887	-2.564	-4.166	-5.714	-7.282	-8.118	
	K-BAR	0.945	0.945	0.945	0.945	0.944	0.944	0.945	
	V-BAR	449.460	449.111	448.910	449.860	447.026	443.622	441.423	
	VZ-BAR	444.632	442.182	439.705	439.692	437.336	437.428	439.372	
	V-THET-BAR	65.705	78.537	90.439	95.102	92.572	73.760	42.505	
	MACH-BAR	0.409	0.409	0.409	0.410	0.407	0.404	0.402	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.3	-5.9	-9.7	-14.4	
	OMEGABAR	0.049	0.049	0.040	0.018	0.019	0.021	0.024	
	TURNING	-8.4	-10.1	-11.6	-12.2	-12.0	-9.6	-5.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.638	14.638	14.649	14.675	14.674	14.672	14.669	14.663
WCOR= 3.449	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34132.0	P-STATIC	11.962	11.972	11.982	11.991	11.999	12.003	11.998	
	BETABAR	0.378	7.717	9.001	9.535	9.372	7.504	4.344	
	EPSILON	-1.170	-1.800	-3.337	-4.716	-5.934	-6.855	-6.637	
	K-BAR	0.945	0.945	0.945	0.945	0.945	0.945	0.945	
	V-BAR	591.039	589.871	589.672	591.103	590.042	589.499	589.664	
	VZ-BAR	587.381	584.523	582.410	582.936	582.166	584.437	587.970	
	V-THET-BAR	65.653	79.200	92.251	97.917	96.086	76.985	44.663	
	MACH-BAR	0.545	0.544	0.543	0.545	0.544	0.543	0.543	
	U-WHEEL	747.923	770.186	814.715	859.245	903.775	948.304	970.569	
	V-BAR-PR	900.283	905.059	927.990	958.876	995.635	1049.181	1096.818	
	BETABAR-PR	49.274	49.771	51.126	52.559	54.216	56.147	57.584	
	V-THET-B-P	-682.270	-690.985	-722.464	-761.327	-807.689	-871.320	-925.906	
	MACH-BAR-P	0.830	0.834	0.855	0.884	0.918	0.967	1.011	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.903	21.204	21.395	21.029	20.756	20.208	18.985	20.894
ROTOR	T-TOTAL	580.43	580.04	581.83	578.89	580.18	582.36	584.57	580.68
	P-STATIC	14.049	14.158	14.435	14.721	14.949	15.173	15.267	
PR = 1.4250	BETABAR	41.045	40.384	41.030	39.912	40.401	40.724	44.851	
TR = 1.1195	EPSILON	-2.885	-2.587	-3.363	-4.672	-5.728	-6.493	-6.418	
EFF-A = 0.8919	K-BAR	0.830	0.830	0.830	0.830	0.830	0.830	0.830	
EFF-P = 0.8965	V-BAR	865.042	871.431	862.098	820.727	789.828	741.482	651.099	
	VZ-BAR	652.410	663.789	650.340	629.517	601.477	561.978	461.594	
	V-THET-BAR	568.031	564.601	565.924	526.593	511.912	483.688	459.196	
	MACH-BAR	0.775	0.782	0.771	0.732	0.701	0.653	0.567	
	U-WHEEL	739.136	760.818	804.186	847.554	890.923	934.291	955.974	
	V-BAR-PR	674.474	692.195	692.648	706.664	710.939	720.444	678.128	
	BETABAR-PR	14.696	16.467	20.121	27.014	32.216	38.729	47.103	
	V-THET-B-P	-171.105	-196.216	-238.262	-320.961	-379.011	-450.602	-496.778	
	MACH-BAR-P	0.604	0.621	0.620	0.630	0.631	0.634	0.590	
	D-FACTOR	0.445	0.427	0.446	0.442	0.462	0.486	0.550	
	TURNING	34.6	33.3	31.0	25.5	22.0	17.4	10.5	
	INCID-M	-8.1	-6.4	-4.1	-3.0	-2.7	-2.5	-2.2	
	DEVIATION	26.6	20.2	11.5	9.3	7.0	7.5	13.3	
	OMEGABAR-P	0.100	0.055	0.060	0.059	0.103	0.176	0.305	
	LOSS PAR	0.034	0.019	0.021	0.021	0.036	0.060	0.093	
	PT-RATIO	1.428	1.448	1.460	1.433	1.415	1.377	1.294	1.4250
	EFF-AD	0.901	0.945	0.939	0.933	0.879	0.781	0.603	0.8919
	EFF-POLY	0.905	0.947	0.942	0.936	0.885	0.790	0.616	0.8965
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.903	21.199	21.397	21.038	20.762	20.234	18.985	20.894
	T-TOTAL	580.43	580.04	581.83	578.93	580.13	582.30	584.57	580.68
	P-STATIC	14.039	14.065	14.227	14.445	14.656	14.900	14.981	
	BETABAR	41.074	40.101	40.325	38.962	39.293	39.557	43.024	
	EPSILON	-0.113	-1.168	-2.945	-4.171	-5.508	-7.022	-7.979	
	K-BAR	0.830	0.830	0.830	0.830	0.830	0.830	0.830	
	V-BAR	865.758	877.878	877.081	841.596	812.498	765.208	677.860	
	VZ-BAR	652.661	671.497	668.672	654.387	628.812	589.991	495.559	
	V-THET-BAR	568.833	565.472	567.581	529.205	514.536	487.282	462.511	
	MACH-BAR	0.776	0.788	0.786	0.753	0.723	0.676	0.592	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	19.367	20.046	20.487	20.227	20.301	19.232	17.868	20.033
ROTOR PLUS STATOR	T-TOTAL	580.43	580.03	581.83	578.95	580.13	582.34	584.57	580.68
	P-STATIC	16.389	16.399	16.387	16.338	16.280	16.187	16.136	
PR = 1.3662	BETABAR	14.337	13.599	12.143	12.071	12.224	11.446	9.623	
TR = 1.1195	EPSILON	0.450	-0.164	-1.251	-2.460	-3.647	-4.884	-5.489	
EFF-A = 0.7804	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.7899	V-BAR	569.990	623.213	657.262	641.617	652.676	579.503	449.073	
	VZ-BAR	552.237	605.746	642.555	627.430	637.879	567.961	442.755	
	V-THET-BAR	141.146	146.498	138.257	134.180	138.189	115.056	75.065	
IGV,ROTOR,STATOR	MACH-BAR	0.494	0.543	0.574	0.561	0.570	0.502	0.384	
	EFF-POLY	0.668	0.731	0.763	0.756	0.822	0.618	0.549	
PR = 1.3633	INCID-M	-14.6	-12.5	-10.5	-11.5	-12.2	-14.1	-11.8	
TR = 1.1195	DEVIATION	13.6	12.3	11.3	11.7	12.9	13.4	12.6	
EFF-A = 0.7756	OMEGA-BAR	0.224	0.162	0.127	0.123	0.076	0.188	0.279	
EFF-P = 0.7844	LOSS PAR	0.077	0.057	0.047	0.048	0.031	0.080	0.121	
	D-FACTOR	0.517	0.464	0.438	0.427	0.392	0.456	0.594	
	TURNING	26.7	26.5	28.2	26.9	27.1	28.1	33.4	

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Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 12)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.444	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34163.0	P-STATIC	13.551	13.552	13.558	13.571	13.589	13.614	13.628	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.611	-4.224	-5.770	-7.290	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	377.538	377.391	376.337	374.226	371.067	366.807	364.242	
	VZ-BAR	377.538	377.391	376.337	374.226	371.067	366.807	364.242	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.342	0.342	0.341	0.339	0.336	0.332	0.330	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.638	14.638	14.649	14.674	14.674	14.672	14.668	14.662
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.021	13.023	13.034	13.051	13.070	13.092	13.104	
	BETABAR	8.415	10.082	11.631	12.210	11.956	9.584	5.526	
	EPSILON	-0.000	-0.879	-2.560	-4.159	-5.739	-7.291	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	452.779	452.419	452.184	453.086	450.204	446.806	444.576	
	VZ-BAR	447.905	445.426	442.898	442.836	440.438	440.552	442.512	
	V-THET-BAR	66.257	79.195	91.162	95.827	93.262	74.390	42.809	
	MACH-BAR	0.412	0.412	0.412	0.413	0.410	0.407	0.405	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.3	-5.9	-9.7	-14.4	
	OMEGABAR	0.049	0.049	0.040	0.018	0.019	0.021	0.024	
	TURNING	-8.4	-10.1	-11.6	-12.2	-12.0	-9.6	-5.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.638	14.638	14.649	14.674	14.674	14.672	14.668	14.662
WCOR= 3.452	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34163.0	P-STATIC	11.916	11.926	11.938	11.948	11.958	11.963	11.959	
	BETABAR	6.372	7.711	8.994	9.526	9.366	7.510	4.341	
	EPSILON	-1.170	-1.818	-3.418	-4.921	-6.119	-6.834	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	596.487	595.252	594.969	596.163	594.838	594.114	594.272	
	VZ-BAR	592.802	589.863	587.653	587.939	586.967	589.004	592.567	
	V-THET-BAR	66.205	79.864	93.010	98.684	96.803	77.644	44.984	
	MACH-BAR	0.550	0.549	0.549	0.550	0.548	0.548	0.548	
	U-WHEEL	748.602	770.885	815.455	860.025	904.596	949.166	971.451	
	V-BAR-PR	903.925	906.545	931.274	961.937	998.499	1051.900	1099.762	
	BETABAR-PR	49.019	49.515	50.874	52.322	53.999	55.946	57.397	
	V-THET-B-P	-682.398	-691.021	-722.445	-761.341	-807.792	-871.521	-926.467	
	MACH-BAR-P	0.634	0.838	0.859	0.887	0.921	0.970	1.014	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.205	21.175	21.429	21.108	20.713	20.233	18.985	20.902
ROTOR	T-TOTAL	580.43	580.77	582.26	580.41	582.33	584.94	584.57	582.13
-----	P-STATIC	14.454	14.575	14.866	15.129	15.352	15.576	15.671	
PR = 1.4255	BETABAR	45.411	42.775	43.154	42.552	44.060	44.742	48.614	
TR = 1.1223	EPSILON	-2.686	-2.655	-3.602	-4.696	-5.802	-6.582	-6.418	
EFF-A = 0.8729	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.8781	V-BAR	797.759	840.311	832.987	795.542	757.480	711.172	611.969	
	VZ-BAR	560.038	616.824	607.681	586.048	544.335	505.179	404.588	
	V-THET-BAR	568.135	570.640	569.728	537.990	526.760	500.543	459.146	
	MACH-BAR	0.709	0.750	0.742	0.706	0.668	0.623	0.531	
	U-WHEEL	739.807	761.509	804.917	848.323	891.731	935.139	956.842	
	V-BAR-PR	585.759	645.682	651.641	663.167	655.369	666.560	641.399	
	BETABAR-PR	17.042	17.192	21.159	27.903	33.841	40.709	50.892	
	V-THET-B-P	-171.673	-190.869	-235.188	-310.333	-364.971	-434.596	-497.696	
	MACH-BAR-P	0.520	0.576	0.580	0.589	0.578	0.584	0.556	
	D-FACTOR	0.545	0.482	0.494	0.493	0.525	0.545	0.584	
	TURNING	32.0	32.3	29.7	24.4	20.2	15.2	6.5	
	INCID-M	-6.4	-6.6	-4.4	-3.2	-2.9	-2.7	-2.4	
	DEVIATION	28.9	20.9	12.6	10.2	8.7	9.5	17.0	
	OMEGABAR-P	0.186	0.070	0.062	0.072	0.135	0.203	0.304	
	LOSS PAR	0.062	0.024	0.022	0.025	0.047	0.068	0.086	
	PT-RATIO	1.380	1.447	1.463	1.438	1.412	1.379	1.294	1.4255
	EFF-AD	0.811	0.930	0.937	0.920	0.844	0.753	0.643	0.8729
	EFF-POLY	0.819	0.933	0.940	0.924	0.851	0.764	0.616	0.8781
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.205	21.161	21.434	21.121	20.719	20.251	18.985	20.902
	T-TOTAL	580.43	580.75	582.26	580.44	582.26	584.93	584.57	582.13
	P-STATIC	14.478	14.518	14.686	14.908	15.131	15.377	15.478	
	BETABAR	45.635	42.638	42.464	41.685	43.072	43.783	47.138	
	EPSILON	-0.113	-1.051	-2.630	-3.942	-5.394	-7.065	-7.979	
	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
	V-BAR	795.828	843.727	846.306	812.765	775.083	729.016	630.916	
	VZ-BAR	556.463	620.705	624.326	606.980	566.199	526.351	429.168	
	V-THET-BAR	568.937	571.460	571.359	540.521	529.310	504.391	462.460	
	MACH-BAR	0.707	0.754	0.755	0.723	0.685	0.639	0.548	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	19.367	20.205	20.696	20.454	20.275	19.557	17.868	20.206
ROTOR PLUS STATOR	T-TOTAL	580.43	580.74	582.25	580.47	582.21	584.94	584.57	582.13
----------	P-STATIC	16.683	16.696	16.685	16.640	16.583	16.502	16.447	
PR = 1.3780	BETABAR	14.309	13.398	11.994	12.080	12.266	11.336	9.697	
TR = 1.1223	EPSILON	0.450	-0.122	-1.205	-2.348	-3.557	-4.889	-5.489	
EFF-A = 0.7847	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.7942	V-BAR	539.440	608.173	646.172	631.830	624.779	576.556	405.297	
	VZ-BAR	522.705	591.628	632.065	617.840	610.516	565.268	399.506	
	V-THET-BAR	133.322	140.873	134.276	132.222	132.738	113.405	68.268	
IGV,ROTOR,STATOR	MACH-BAR	0.467	0.529	0.563	0.551	0.544	0.498	0.346	
----------	EFF-POLY	0.769	0.750	0.783	0.771	0.809	0.667	0.503	
PR = 1.3750	INCID-M	-10.0	-10.0	-8.4	-8.8	-8.4	-9.8	-7.6	
TR = 1.1223	DEVIATION	13.5	12.1	11.1	11.7	12.9	13.3	12.6	
EFF-A = 0.7800	OMEGA-BAR	0.146	0.144	0.109	0.107	0.079	0.142	0.319	
EFF-P = 0.7888	LOSS PAR	0.050	0.051	0.041	0.042	0.032	0.060	0.139	
	D-FACTOR	0.516	0.464	0.435	0.426	0.410	0.444	0.638	
	TURNING	31.3	29.2	30.5	29.6	30.8	32.4	37.4	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 13)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.417	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34137.0	P-STATIC	13.570	13.571	13.577	13.590	13.608	13.632	13.647	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.030	-0.930	-2.638	-4.252	-5.796	-7.295	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	374.325	374.160	373.068	370.972	367.785	363.575	361.032	
	VZ-BAR	374.325	374.160	373.088	370.972	367.785	363.575	361.032	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.339	0.339	0.338	0.336	0.333	0.329	0.327	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.639	14.640	14.651	14.675	14.675	14.673	14.670	14.664
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.091	13.094	13.104	13.119	13.137	13.157	13.166	
	BETABAR	8.394	10.057	11.604	12.189	11.947	9.674	5.523	
	EPSILON	-0.000	-0.910	-2.573	-4.198	-5.759	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	442.563	442.292	442.210	443.198	440.505	437.235	435.141	
	VZ-BAR	437.822	435.489	433.172	433.207	430.964	430.999	433.121	
	V-THET-BAR	64.605	77.231	88.946	93.574	91.185	73.473	41.877	
	MACH-BAR	0.403	0.402	0.402	0.403	0.401	0.398	0.396	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.3	-5.9	-9.6	-14.4	
	OMEGABAR	0.049	0.048	0.039	0.017	0.018	0.020	0.023	
	TURNING	-8.4	-10.1	-11.6	-12.2	-11.9	-9.7	-5.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.066	6.367	6.517	
	P-TOTAL	14.639	14.640	14.651	14.676	14.675	14.673	14.670	14.664
WCOR= 3.424	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34137.0	P-STATIC	12.050	12.060	12.071	12.079	12.085	12.066	12.082	
	BETABAR	6.384	7.725	9.014	9.553	9.395	7.603	4.353	
	EPSILON	-1.170	-1.783	-3.213	-4.572	-5.702	-6.495	-6.647	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	580.594	579.422	579.198	580.650	579.907	579.660	579.816	
	VZ-BAR	576.994	574.157	572.043	572.598	572.129	574.552	578.146	
	V-THET-BAR	64.553	77.884	90.748	96.363	94.661	76.687	44.004	
	MACH-BAR	0.535	0.533	0.533	0.535	0.534	0.534	0.534	
	U-WHEEL	748.052	770.298	814.834	859.371	903.907	948.443	970.711	
	V-BAR-PR	894.464	899.499	922.792	953.969	991.071	1044.072	1092.263	
	BETABAR-PR	49.829	50.334	51.690	53.113	54.739	56.611	58.041	
	V-THET-B-P	-683.479	-692.414	-724.086	-763.008	-809.246	-871.757	-926.708	
	MACH-BAR-P	0.824	0.828	0.849	0.878	0.912	0.961	1.006	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.465	21.196	21.659	21.183	21.231	20.818	20.307	21.192
ROTOR	T-TOTAL	581.83	581.71	583.28	580.68	584.83	587.90	588.67	583.78
-----	P-STATIC	14.563	14.687	14.980	15.249	15.513	15.772	15.892	
PR = 1.4452	BETABAR	45.867	43.720	43.381	42.955	44.280	45.236	44.442	
TR = 1.1255	EPSILON	-2.866	-2.621	-3.366	-4.396	-5.428	-6.302	-6.418	
EFF-A = 0.8862	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
EFF-P = 0.8901	V-BAR	805.667	833.868	836.958	790.881	776.179	733.654	691.619	
	VZ-BAR	561.010	602.670	606.305	578.841	555.698	516.773	493.785	
	V-THET-BAR	576.244	576.286	574.868	538.920	541.892	521.044	484.266	
	MACH-BAR	0.715	0.743	0.745	0.701	0.685	0.642	0.602	
	U-WHEEL	739.245	760.929	804.303	847.678	891.052	934.427	956.114	
	V-BAR-PR	583.656	630.326	650.186	656.088	656.303	661.790	682.982	
	BETABAR-PR	16.013	17.031	20.665	28.076	32.143	38.657	43.699	
	V-THET-B-P	-161.001	-164.644	-229.443	-308.759	-349.160	-413.383	-471.848	
	MACH-BAR-P	0.518	0.562	0.579	0.582	0.579	0.579	0.595	
	D-FACTOR	0.547	0.497	0.493	0.497	0.526	0.553	0.554	
	TURNING	33.8	33.3	31.0	25.0	22.6	18.0	14.3	
	INCID-M	-7.6	-5.8	-3.6	-2.4	-2.2	-2.0	-1.7	
	DEVIATION	27.9	20.8	12.1	10.4	7.8	7.4	9.8	
	OMEGABAR-P	0.177	0.084	0.051	0.072	0.116	0.185	0.230	
	LOSS PAR	0.059	0.029	0.016	0.025	0.041	0.064	0.075	
	PT-RATIO	1.399	1.448	1.478	1.443	1.447	1.419	1.384	1.4452
	EFF-AD	0.828	0.916	0.949	0.922	0.873	0.788	0.722	0.8862
	EFF-POLY	0.836	0.922	0.952	0.926	0.879	0.798	0.734	0.8901
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.483	21.184	21.662	21.191	21.231	20.824	20.307	21.192
	T-TOTAL	581.83	581.70	583.29	580.88	584.72	587.88	588.67	583.78
	P-STATIC	14.556	14.619	14.807	15.019	15.263	15.510	15.623	
	BETABAR	45.913	43.523	42.744	42.023	43.200	44.024	43.054	
	EPSILON	-0.113	-1.061	-2.378	-4.082	-5.504	-6.979	-7.979	
	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
	V-BAR	806.176	838.180	849.566	808.491	795.069	755.053	714.470	
	VZ-BAR	560.699	607.776	623.913	600.611	579.585	542.918	522.069	
	V-THET-BAR	579.060	577.169	576.622	541.224	544.251	524.734	487.761	
	MACH-BAR	0.716	0.747	0.758	0.719	0.703	0.662	0.624	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	19.719	20.356	21.020	20.760	20.695	19.974	19.411	20.543
ROTOR PLUS STATOR	T-TOTAL	581.83	581.69	583.30	580.88	584.73	587.90	588.67	583.78
----------	P-STATIC	17.121	17.132	17.127	17.086	17.029	16.951	16.907	
PR = 1.4009	BETABAR	14.556	13.620	12.252	12.458	12.733	11.876	10.339	
TR = 1.1255	EPSILON	0.450	-0.138	-1.338	-2.512	-3.725	-4.911	-5.489	
EFF-A = 0.8058	K-BAR	0.912	0.912	0.912	0.912	0.912	0.912	0.912	
EFF-P = 0.8149	V-BAR	525.822	579.437	631.138	614.603	616.939	568.710	523.094	
	VZ-BAR	508.945	563.150	616.762	600.131	601.768	556.535	514.602	
	V-THET-BAR	132.149	136.396	133.936	132.584	135.975	117.045	93.878	
IGV,ROTOR,STATOR	MACH-BAR	0.454	0.502	0.549	0.535	0.535	0.490	0.449	
----------	EFF-POLY	0.809	0.798	0.827	0.861	0.809	0.679	0.635	
PR = 1.3980	INCID-M	-9.7	-9.1	-8.1	-8.5	-8.3	-9.6	-11.7	
TR = 1.1255	DEVIATION	13.8	12.3	11.4	12.1	13.4	13.9	13.3	
EFF-A = 0.8028	OMEGA-BAR	0.129	0.126	0.094	0.070	0.090	0.160	0.191	
EFF-P = 0.8098	LOSS PAR	0.044	0.045	0.035	0.027	0.036	0.068	0.083	
	D-FACTOR	0.544	0.500	0.457	0.443	0.440	0.484	0.516	
	TURNING	31.4	29.9	30.5	29.6	30.5	32.1	32.7	

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Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 14)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.397	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34094.0	P-STATIC	13.585	13.586	13.592	13.604	13.622	13.646	13.660	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.667	-4.256	-5.809	-7.295	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	371.847	371.681	370.582	368.500	365.363	361.179	358.651	
	VZ-BAR	371.847	371.681	370.582	368.500	365.363	361.179	358.651	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.337	0.337	0.336	0.334	0.331	0.327	0.325	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.640	14.641	14.652	14.676	14.676	14.674	14.671	14.665
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.095	13.098	13.107	13.122	13.140	13.160	13.171	
	BETABAR	8.398	10.062	11.610	12.184	11.943	9.673	5.521	
	EPSILON	-0.000	-0.910	-2.597	-4.195	-5.761	-7.291	-8.118	
	K-BAR	0.945	0.945	0.945	0.945	0.944	0.944	0.945	
	V-BAR	442.109	441.873	441.820	442.837	440.157	436.868	434.801	
	VZ-BAR	437.368	435.669	432.780	432.862	430.629	430.639	432.784	
	V-THET-BAR	64.571	77.196	88.914	93.462	91.064	73.402	41.828	
	MACH-BAR	0.402	0.402	0.402	0.403	0.400	0.397	0.395	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.3	-5.9	-9.6	-14.4	
	OMEGABAR	0.049	0.048	0.038	0.017	0.017	0.019	0.023	
	TURNING	-8.4	-10.1	-11.6	-12.2	-11.9	-9.7	-5.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.640	14.641	14.652	14.676	14.676	14.674	14.671	14.665
WCOR= 3.404	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34094.0	P-STATIC	12.056	12.065	12.076	12.084	12.091	12.093	12.088	
	BETABAR	6.387	7.728	9.019	9.551	9.395	7.605	4.353	
	EPSILON	-1.170	-1.800	-3.302	-4.690	-5.782	-6.538	-6.657	
	K-BAR	0.945	0.945	0.945	0.945	0.945	0.945	0.945	
	V-BAR	580.012	578.942	578.740	580.118	579.219	578.895	579.114	
	VZ-BAR	576.412	573.677	571.584	572.077	571.449	573.789	577.444	
	V-THET-BAR	64.519	77.848	90.725	96.250	94.553	76.611	43.953	
	MACH-BAR	0.534	0.533	0.533	0.534	0.533	0.533	0.533	
	U-WHEEL	747.090	769.328	813.808	858.288	902.769	947.249	969.489	
	V-BAR-PR	893.395	898.473	921.719	952.882	989.836	1042.718	1090.897	
	BETABAR-PR	49.820	50.319	51.674	53.103	54.737	56.612	58.040	
	V-THET-B-P	-662.571	-691.480	-723.083	-762.038	-808.215	-870.638	-925.536	
	MACH-BAR-P	0.822	0.827	0.848	0.877	0.911	0.960	1.004	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.645	21.299	21.625	21.373	21.208	21.043	20.557	21.288
ROTOR	T-TOTAL	582.76	581.40	583.46	582.86	585.94	589.07	590.23	584.66
	P-STATIC	14.695	15.054	15.349	15.621	15.871	16.131	16.250	
PR = 1.4516	BETABAR	47.964	45.042	45.516	45.608	47.315	47.306	46.762	
TR = 1.1272	EPSILON	-2.865	-2.587	-3.282	-4.485	-5.525	-6.265	-6.416	
EFF-A = 0.8859	K-BAR	0.912	0.912	0.912	0.912	0.912	0.912	0.912	
EFF-P = 0.8896	V-BAR	789.564	811.921	808.691	774.609	747.960	719.454	678.686	
	VZ-BAR	528.691	573.702	566.658	541.891	507.092	487.853	464.751	
	V-THET-BAR	586.427	574.506	576.954	553.509	549.817	528.785	494.591	
	MACH-BAR	0.699	0.722	0.717	0.684	0.657	0.628	0.589	
	U-WHEEL	738.313	759.970	803.291	846.610	889.930	933.250	954.910	
	V-BAR-PR	550.076	602.947	610.223	616.123	610.608	633.719	654.131	
	BETABAR-PR	16.029	17.910	21.774	28.408	33.850	39.661	44.726	
	V-THET-B-P	-151.886	-185.465	-226.336	-293.101	-340.114	-404.464	-460.319	
	MACH-BAR-P	0.487	0.536	0.541	0.544	0.536	0.553	0.568	
	D-FACTOR	0.567	0.526	0.537	0.544	0.575	0.583	0.584	
	TURNING	33.8	32.4	29.9	24.7	20.9	17.0	13.3	
	INCID-M	-7.6	-5.8	-3.6	-2.4	-2.2	-2.0	-1.7	
	DEVIATION	27.9	21.7	13.2	10.7	8.7	8.4	10.9	
	OMEGABAR-P	0.171	0.066	0.059	0.079	0.133	0.178	0.225	
	LOSS PAR	0.058	0.023	0.021	0.028	0.047	0.060	0.072	
	PT-RATIO	1.410	1.455	1.476	1.456	1.445	1.434	1.401	1.4516
	EFF-AD	0.836	0.935	0.942	0.917	0.856	0.800	0.734	0.8859
	EFF-POLY	0.843	0.938	0.945	0.921	0.863	0.810	0.746	0.8896
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.645	21.288	21.627	21.381	21.210	21.048	20.557	21.288
	T-TOTAL	582.76	581.41	583.43	582.85	585.85	589.04	590.23	584.66
	P-STATIC	14.933	15.021	15.207	15.431	15.658	15.914	16.029	
	BETABAR	48.294	45.010	44.919	44.765	46.259	46.258	45.578	
	EPSILON	-0.113	-0.998	-2.593	-3.954	-5.327	-6.964	-7.979	
	K-BAR	0.912	0.912	0.912	0.912	0.912	0.912	0.912	
	V-BAR	786.610	813.795	819.102	789.249	764.561	737.147	697.508	
	VZ-BAR	523.341	575.352	580.018	560.367	528.625	509.673	488.214	
	V-THET-BAR	587.256	575.492	578.364	555.789	552.362	532.559	498.101	
	MACH-BAR	0.696	0.724	0.727	0.699	0.673	0.645	0.607	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	19.881	20.456	21.179	20.941	20.875	20.218	19.719	20.722
ROTOR PLUS STATOR	T-TOTAL	582.76	581.42	583.38	582.83	585.81	589.05	590.23	584.66
	P-STATIC	17.412	17.422	17.420	17.382	17.330	17.255	17.211	
PR = 1.4130	BETABAR	14.917	13.532	12.464	12.615	12.773	11.562	11.286	
TR = 1.1272	EPSILON	0.450	-0.066	-1.195	-2.369	-3.639	-4.886	-5.489	
EFF-A = 0.8165	K-BAR	0.915	0.915	0.915	0.915	0.915	0.915	0.915	
EFF-P = 0.8253	V-BAR	510.154	559.387	616.917	602.431	603.670	559.702	519.886	
	VZ-BAR	492.982	543.665	602.379	587.889	588.756	548.343	509.833	
	V-THET-BAR	131.322	130.831	133.141	131.566	133.461	112.187	101.743	
IGV,ROTOR,STATOR	MACH-BAR	0.439	0.484	0.536	0.523	0.522	0.481	0.445	
	EFF-POLY	0.802	0.786	0.866	0.850	0.864	0.666	0.630	
PR = 1.4102	INCID-M	-7.4	-7.6	-5.9	-5.7	-5.3	-7.4	-9.2	
TR = 1.1272	DEVIATION	14.1	12.2	11.6	12.3	13.4	13.5	14.2	
EFF-A = 0.8137	OMEGA-BAR	0.134	0.133	0.070	0.074	0.080	0.162	0.185	
EFF-P = 0.8205	LOSS PAR	0.046	0.047	0.026	0.029	0.024	0.069	0.080	
	D-FACTOR	0.557	0.511	0.455	0.453	0.441	0.491	0.510	
	TURNING	33.4	31.5	32.5	32.2	33.5	34.7	34.3	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 15)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.373	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=34213.0	P-STATIC	13.578	13.579	13.585	13.597	13.615	13.639	13.653	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.611	-4.225	-5.770	-7.290	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	372.998	372.831	371.799	369.727	366.592	362.401	359.861	
	VZ-BAR	372.998	372.831	371.799	369.727	366.592	362.401	359.861	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.338	0.338	0.337	0.335	0.332	0.328	0.326	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.681	14.683	14.683	14.677	14.677	14.675	14.672	14.666
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.139	13.142	13.152	13.167	13.185	13.205	13.215	
	BETABAR	8.392	10.053	11.593	12.775	11.930	9.656	5.512	
	EPSILON	-0.000	-0.910	-2.542	-4.167	-5.729	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	435.643	435.475	435.409	436.279	433.589	430.302	428.299	
	VZ-BAR	430.979	428.781	426.526	426.466	424.224	424.188	426.319	
	V-THET-BAR	63.576	76.012	87.502	92.010	89.626	72.176	41.141	
	MACH-BAR	0.396	0.396	0.396	0.397	0.394	0.391	0.389	
	INCID-H	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.3	-6.0	-9.6	-14.4	
	OMEGABAR	0.048	0.046	0.037	0.016	0.016	0.018	0.021	
	TURNING	-8.4	-10.1	-11.6	-12.2	-11.9	-9.7	-5.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.641	14.643	14.658	14.677	14.677	14.675	14.672	14.666
WCOR= 3.380	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=34213.0	P-STATIC	12.138	12.148	12.157	12.166	12.175	12.177	12.173	
	BETABAR	6.398	7.741	9.027	9.562	9.407	7.612	4.357	
	EPSILON	-1.170	-1.840	-3.361	-4.856	-6.057	-6.557	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	570.064	569.099	569.033	570.383	569.245	568.762	568.994	
	VZ-BAR	566.514	563.906	561.985	562.458	561.590	563.737	567.349	
	V-THET-BAR	63.525	76.655	89.277	94.752	93.041	75.334	43.230	
	MACH-BAR	0.524	0.523	0.523	0.525	0.524	0.523	0.523	
	U-WHEEL	749.698	772.013	816.649	861.284	905.920	950.555	972.873	
	V-BAR-PR	889.815	895.275	919.187	950.758	988.011	1041.070	1089.091	
	BETABAR-PR	50.456	50.959	52.309	53.729	55.360	57.213	58.605	
	V-THET-B-P	-686.172	-695.358	-727.371	-766.532	-812.878	-875.221	-929.642	
	MACH-BAR-P	0.818	0.823	0.845	0.874	0.909	0.957	1.002	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.792	21.440	21.717	21.594	21.190	21.061	20.748	21.386
ROTOR	T-TOTAL	583.64	583.25	584.05	582.92	587.19	590.42	591.42	585.60
	P-STATIC	15.146	15.292	15.599	15.884	16.137	16.407	16.534	
PR = 1.4582	BETABAR	49.317	46.901	46.638	45.929	49.802	49.909	48.823	
TR = 1.1290	EPSILON	-2.885	-2.451	-3.344	-4.651	-5.795	-6.267	-6.418	
EFF-A = 0.8849	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8884	V-BAR	779.020	803.081	795.566	766.990	726.804	698.874	668.040	
	VZ-BAR	507.822	548.717	546.240	533.479	469.106	450.073	443.325	
	V-THET-BAR	590.752	586.371	578.401	551.064	555.138	534.658	499.740	
	MACH-BAR	0.688	0.712	0.704	0.677	0.636	0.608	0.579	
	U-WHEEL	740.890	762.623	806.095	849.566	893.037	936.507	958.243	
	V-BAR-PR	529.551	576.338	591.837	611.338	578.137	603.370	637.778	
	BETABAR-PR	16.470	17.804	22.627	29.229	35.766	41.760	45.964	
	V-THET-B-P	-150.138	-176.252	-227.694	-298.501	-337.898	-401.889	-458.502	
	MACH-BAR-P	0.468	0.511	0.524	0.540	0.506	0.525	0.553	
	D-FACTOR	0.611	0.560	0.557	0.548	0.611	0.614	0.601	
	TURNING	34.0	33.2	29.7	24.5	19.6	15.5	12.6	
	INCID-H	-6.9	-5.2	-3.0	-1.8	-1.5	-1.4	-1.2	
	DEVIATION	28.3	21.5	14.0	11.6	10.6	10.5	12.1	
	OMEGABAR-P	0.168	0.079	0.057	0.055	0.152	0.193	0.222	
	LOSS PAR	0.056	0.027	0.020	0.019	0.052	0.063	0.069	
	PT-RATIO	1.420	1.464	1.482	1.471	1.444	1.435	1.414	1.4582
	EFF-AD	0.842	0.925	0.944	0.942	0.838	0.787	0.742	0.8849
	EFF-POLY	0.850	0.929	0.947	0.945	0.846	0.797	0.755	0.8884
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.792	21.428	21.718	21.603	21.198	21.064	20.748	21.386
	T-TOTAL	583.64	583.25	584.06	582.91	587.08	590.39	591.42	585.60
	P-STATIC	15.180	15.259	15.480	15.719	15.952	16.201	16.328	
	BETABAR	49.644	46.865	46.155	45.200	48.734	48.778	47.236	
	EPSILON	-0.113	-1.030	-2.549	-3.872	-5.280	-6.990	-7.979	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	776.326	804.814	804.302	779.800	741.833	715.883	685.610	
	VZ-BAR	502.699	550.280	557.144	549.480	489.289	471.750	465.513	
	V-THET-BAR	591.587	587.269	580.079	553.317	557.580	538.459	503.347	
	MACH-BAR	0.686	0.714	0.712	0.689	0.650	0.624	0.595	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	20.028	20.711	21.350	21.196	20.843	20.533	19.969	20.911
ROTOR PLUS STATOR	T-TOTAL	583.64	583.25	584.06	582.89	586.90	590.40	591.42	585.60
	P-STATIC	17.675	17.686	17.685	17.650	17.598	17.532	17.490	
PR = 1.4258	BETABAR	15.128	14.222	12.799	12.796	13.104	12.835	12.115	
TR = 1.1290	EPSILON	0.450	-0.043	-1.122	-2.275	-3.430	-4.882	-5.489	
EFF-A = 0.8270	K-BAR	0.915	0.915	0.915	0.915	0.915	0.915	0.915	
EFF-P = 0.8354	V-BAR	495.984	555.734	606.309	597.376	576.936	559.514	513.914	
	VZ-BAR	478.796	538.710	591.245	582.542	561.912	545.533	502.469	
	V-THET-BAR	129.439	136.477	134.311	132.301	130.802	124.293	107.855	
IGV,ROTOR,STATOR	MACH-BAR	0.426	0.480	0.526	0.518	0.498	0.480	0.439	
	EFF-POLY	0.801	0.871	0.884	0.858	0.859	0.754	0.641	
PR = 1.4230	INCID-H	-6.0	-5.8	-4.7	-5.3	-2.8	-4.9	-7.5	
TR = 1.1290	DEVIATION	14.3	12.9	11.9	12.4	13.7	14.8	15.1	
EFF-A = 0.8247	OMEGA-BAR	0.136	0.116	0.059	0.069	0.068	0.109	0.176	
EFF-P = 0.8309	LOSS PAR	0.047	0.041	0.022	0.027	0.027	0.046	0.076	
	D-FACTOR	0.572	0.513	0.459	0.452	0.465	0.473	0.510	
	TURNING	34.5	32.6	33.4	32.4	35.6	35.9	35.1	

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Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 16)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.333	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34158.0	P-STATIC	13.607	13.608	13.614	13.625	13.643	13.666	13.680	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.611	-4.225	-5.770	-7.290	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	368.001	367.843	366.821	364.779	361.690	357.562	355.050	
	VZ-BAR	368.001	367.843	366.821	364.779	361.690	357.562	355.050	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.333	0.333	0.332	0.330	0.327	0.324	0.321	
IGV TRAILING EDGE	DIAMETER	5.018	5.207	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.643	14.645	14.656	14.679	14.678	14.677	14.674	14.668
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.183	13.185	13.195	13.210	13.226	13.246	13.256	
	BETABAR	8.384	10.044	11.587	12.766	11.914	9.686	5.618	
	EPSILON	-0.000	-0.910	-2.542	-4.167	-5.729	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	429.283	429.190	429.198	430.046	427.458	424.206	422.286	
	VZ-BAR	424.695	422.605	420.451	420.388	418.250	418.191	420.258	
	V-THET-BAR	62.593	74.849	86.206	90.631	88.245	71.082	41.339	
	MACH-BAR	0.390	0.390	0.390	0.391	0.389	0.385	0.384	
	INCID-H	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.6	-4.3	-6.0	-9.6	-14.3	
	OMEGABAR	0.047	0.045	0.036	0.015	0.015	0.017	0.020	
	TURNING	-8.4	-10.0	-11.6	-12.2	-11.9	-9.6	-5.6	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.643	14.645	14.656	14.679	14.678	14.676	14.674	14.668
WCOR= 3.339	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34158.0	P-STATIC	12.217	12.227	12.236	12.243	12.252	12.254	12.250	
	BETABAR	6.406	7.751	9.041	9.575	9.415	7.621	4.451	
	EPSILON	-1.170	-1.805	-3.305	-4.874	-6.094	-6.592	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	560.565	559.658	559.677	561.112	559.980	559.458	559.687	
	VZ-BAR	557.065	554.534	552.723	553.295	552.437	554.499	557.999	
	V-THET-BAR	62.543	75.481	87.952	93.333	91.604	74.196	43.438	
	MACH-BAR	0.515	0.514	0.514	0.516	0.515	0.514	0.514	
	U-WHEEL	748.493	770.772	815.336	859.899	904.463	949.027	971.309	
	V-BAR-PR	883.657	889.349	913.563	945.393	982.821	1035.767	1082.730	
	BETABAR-PR	50.920	51.425	52.769	54.178	55.798	57.631	58.978	
	V-THET-B-P	-685.950	-695.291	-727.384	-766.566	-812.859	-874.831	-927.870	
	MACH-BAR-P	0.812	0.817	0.839	0.869	0.903	0.952	0.995	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	21.012	21.425	21.883	21.724	21.424	21.297	20.954	21.544
ROTOR	T-TOTAL	584.83	584.69	584.96	584.06	588.39	592.22	593.08	586.88
PR = 1.4688	P-STATIC	15.359	15.501	15.828	16.125	16.390	16.662	16.791	
TR = 1.1314	BETABAR	50.697	49.312	47.860	47.546	51.213	51.827	50.649	
EFF-A = 0.8859	EPSILON	-2.885	-2.417	-3.198	-4.537	-5.739	-6.397	-6.418	
EFF-P = 0.8894	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	775.743	787.598	788.199	756.852	721.688	694.170	661.026	
	VZ-BAR	491.367	513.471	528.832	510.875	452.081	429.020	419.140	
	V-THET-BAR	600.280	597.198	584.458	558.417	562.545	545.723	511.154	
	MACH-BAR	0.684	0.696	0.696	0.667	0.631	0.603	0.571	
	U-WHEEL	739.699	761.397	804.799	848.200	891.601	935.002	956.702	
	V-BAR-PR	510.764	539.101	572.938	587.363	559.156	579.309	611.712	
	BETABAR-PR	15.841	17.729	22.616	29.563	36.050	42.219	46.749	
	V-THET-B-P	-139.420	-164.200	-220.340	-289.783	-329.056	-389.279	-445.549	
	MACH-BAR-P	0.451	0.476	0.506	0.517	0.489	0.503	0.529	
	D-FACTOR	0.634	0.603	0.578	0.575	0.632	0.641	0.627	
	TURNING	35.1	33.7	30.2	24.6	19.7	15.4	12.2	
	INCID-H	-6.5	-4.7	-2.5	-1.4	-1.1	-1.0	-0.8	
	DEVIATION	27.7	21.5	14.0	11.9	10.9	11.0	12.9	
	OMEGABAR-P	0.161	0.106	0.053	0.058	0.145	0.194	0.224	
	LOSS PAR	0.054	0.036	0.018	0.020	0.049	0.063	0.069	
	PT-RATIO	1.435	1.463	1.493	1.480	1.460	1.451	1.428	1.4688
	EFF-AD	0.853	0.903	0.950	0.941	0.849	0.792	0.747	0.8859
	EFF-POLY	0.860	0.908	0.953	0.944	0.857	0.803	0.760	0.8894
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	21.012	21.414	21.879	21.734	21.431	21.299	20.954	21.544
	T-TOTAL	584.83	584.69	584.97	584.03	588.26	592.19	593.08	586.88
	P-STATIC	15.387	15.479	15.721	15.971	16.202	16.460	16.587	
	BETABAR	50.998	49.318	47.852	46.812	50.067	50.641	49.366	
	EPSILON	-0.113	-0.962	-2.535	-3.755	-5.206	-6.922	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	773.575	788.728	795.758	768.891	736.715	710.712	678.419	
	VZ-BAR	486.892	514.145	538.089	526.227	472.896	450.718	441.802	
	V-THET-BAR	601.127	598.101	586.246	560.603	564.893	549.513	514.843	
	MACH-BAR	0.682	0.697	0.704	0.678	0.645	0.618	0.588	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	20.234	20.781	21.424	21.329	21.072	20.764	20.204	21.063
ROTOR PLUS STATOR	T-TOTAL	584.83	584.69	585.00	583.99	588.02	592.17	593.08	586.88
PR = 1.4360	P-STATIC	17.889	17.900	17.900	17.870	17.828	17.762	17.721	
TR = 1.1314	BETABAR	15.516	14.536	13.193	13.099	13.414	13.472	13.187	
EFF-A = 0.8287	EPSILON	0.450	-0.072	-1.133	-2.177	-3.343	-4.848	-5.489	
EFF-P = 0.8372	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	492.880	541.366	593.075	588.115	574.457	557.223	511.903	
	VZ-BAR	474.917	524.045	577.423	572.812	558.785	541.891	498.404	
	V-THET-BAR	131.847	135.824	135.351	133.288	133.267	129.813	116.781	
IGV,ROTOR,STATOR	MACH-BAR	0.423	0.467	0.513	0.509	0.495	0.478	0.437	
	EFF-POLY	0.799	0.828	0.858	0.856	0.859	0.749	0.643	
PR = 1.4334	INCID-H	-4.7	-3.3	-3.4	-3.7	-1.4	-3.0	-5.4	
TR = 1.1314	DEVIATION	14.7	13.2	12.3	12.7	14.0	15.5	16.1	
EFF-A = 0.8268	OMEGA-BAR	0.138	0.107	0.074	0.070	0.069	0.111	0.172	
EFF-P = 0.8330	LOSS PAR	0.047	0.038	0.027	0.027	0.028	0.047	0.074	
	D-FACTOR	0.578	0.526	0.472	0.460	0.467	0.476	0.509	
	TURNING	35.5	34.8	34.3	33.7	36.7	37.2	36.2	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 17)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.303	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
MCOR=34239.0	P-STATIC	13.651	13.652	13.658	13.669	13.686	13.708	13.721	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.611	-4.225	-5.770	-7.290	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	360.195	360.041	359.043	357.045	354.025	349.994	347.542	
	VZ-BAR	360.195	360.041	359.043	357.045	354.025	349.994	347.542	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.326	0.326	0.325	0.323	0.320	0.317	0.314	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.666	6.848	
	P-TOTAL	14.683	14.685	14.656	14.679	14.678	14.677	14.674	14.668
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.247	13.249	13.258	13.273	13.289	13.307	13.317	
	BETABAR	8.369	10.129	11.580	12.148	11.899	9.631	5.608	
	EPSILON	-0.000	-0.908	-2.542	-4.167	-5.729	-7.291	-8.118	
	K-BAR	0.960	0.960	0.960	0.960	0.959	0.959	0.960	
	V-BAR	419.399	419.314	419.364	420.386	417.828	414.658	412.777	
	VZ-BAR	414.934	412.771	410.827	410.933	408.850	408.798	410.802	
	V-THET-BAR	61.039	73.743	84.181	88.459	86.152	69.370	40.338	
	MACH-BAR	0.381	0.381	0.381	0.382	0.379	0.377	0.375	
	INCID-H	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.6	-3.6	-4.4	-6.0	-9.6	-14.3	
	OMEGABAR	0.049	0.047	0.037	0.015	0.016	0.018	0.021	
	TURNING	-8.4	-10.1	-11.6	-12.1	-11.9	-9.6	-5.6	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.643	14.645	14.656	14.679	14.678	14.676	14.674	14.668
WCOR= 3.309	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
MCOR=34239.0	P-STATIC	12.334	12.348	12.353	12.359	12.367	12.370	12.367	
	BETABAR	6.413	7.849	9.065	9.593	9.433	7.635	4.459	
	EPSILON	-1.170	-1.766	-3.224	-4.767	-6.143	-6.743	-6.637	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	546.017	545.031	545.039	546.648	545.657	545.013	545.218	
	VZ-BAR	542.601	539.919	538.231	539.003	538.278	540.169	543.568	
	V-THET-BAR	60.990	74.424	85.874	91.099	89.431	72.409	42.387	
	MACH-BAR	0.501	0.500	0.500	0.502	0.501	0.500	0.500	
	U-WHEEL	750.268	772.600	817.269	861.938	906.608	951.277	973.612	
	V-BAR-PR	877.222	882.591	908.097	940.599	978.535	1031.604	1078.260	
	BETABAR-PR	51.790	52.284	53.650	55.036	56.626	58.423	59.727	
	V-THET-B-P	-689.277	-698.176	-731.395	-770.839	-817.177	-878.868	-931.225	
	MACH-BAR-P	0.805	0.810	0.833	0.863	0.898	0.947	0.989	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	21.159	21.532	22.002	21.980	21.780	21.336	21.057	21.725
ROTOR	T-TOTAL	585.61	584.87	585.64	584.71	588.20	591.93	594.12	587.11
-----	P-STATIC	15.663	15.816	16.144	16.459	16.733	16.996	17.122	
PR = 1.4811	BETABAR	52.487	50.739	49.407	48.548	51.182	53.883	53.646	
TR = 1.1319	EPSILON	-2.886	-2.605	-3.275	-4.645	-5.824	-6.446	-6.418	
EFF-A = 0.9028	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.9059	V-BAR	761.131	769.975	771.774	746.500	716.066	668.801	640.059	
	VZ-BAR	463.483	487.277	502.176	494.177	448.870	394.217	379.405	
	V-THET-BAR	603.742	596.158	586.047	559.510	557.907	540.267	515.487	
	MACH-BAR	0.670	0.679	0.680	0.656	0.625	0.579	0.552	
	U-WHEEL	741.853	763.203	806.707	850.211	893.715	937.219	958.971	
	V-BAR-PR	483.509	515.135	548.557	573.371	560.594	559.468	583.632	
	BETABAR-PR	16.548	18.916	23.717	30.465	36.802	45.196	49.453	
	V-THET-B-P	-137.711	-167.045	-220.661	-290.701	-335.808	-396.953	-443.484	
	MACH-BAR-P	0.425	0.454	0.483	0.504	0.490	0.485	0.503	
	D-FACTOR	0.664	0.628	0.604	0.589	0.628	0.657	0.654	
	TURNING	35.2	33.4	29.9	24.6	19.8	13.2	10.3	
	INCID-H	-5.6	-3.8	-1.6	-0.5	-0.3	-0.2	-0.1	
	DEVIATION	28.4	22.7	15.1	12.8	11.6	14.0	15.6	
	OMEGABAR-P	0.157	0.097	0.050	0.039	0.106	0.188	0.228	
	LOSS PAR	0.053	0.033	0.017	0.014	0.036	0.058	0.067	
	PT-RATIO	1.445	1.470	1.501	1.497	1.484	1.454	1.435	1.4811
	EFF-AD	0.860	0.913	0.958	0.961	0.891	0.799	0.748	0.9028
	EFF-POLY	0.867	0.917	0.956	0.963	0.897	0.809	0.760	0.9059
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	21.159	21.525	21.996	21.984	21.789	21.341	21.057	21.725
	T-TOTAL	585.61	584.88	585.64	584.70	588.10	591.89	594.12	587.11
	P-STATIC	15.696	15.789	16.038	16.306	16.564	16.820	16.945	
	BETABAR	52.848	50.719	48.967	47.825	50.188	52.720	52.393	
	EPSILON	-0.113	-0.977	-2.460	-3.852	-5.219	-6.910	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	758.553	771.560	779.217	758.121	729.610	683.821	655.391	
	VZ-BAR	458.113	488.492	511.585	509.005	467.147	414.196	399.951	
	V-THET-BAR	604.595	597.200	587.787	561.838	560.445	544.107	519.208	
	MACH-BAR	0.667	0.680	0.687	0.667	0.638	0.593	0.566	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	20.381	20.947	21.536	21.449	21.303	20.774	20.322	21.194
ROTOR PLUS STATOR	T-TOTAL	585.61	584.89	585.64	584.68	587.92	591.85	594.12	587.11
-----------------	P-STATIC	18.184	18.195	18.196	18.164	18.119	18.058	18.022	
PR = 1.4449	BETABAR	15.836	14.939	13.815	13.389	13.683	13.898	13.811	
TR = 1.1319	EPSILON	0.450	-0.090	-1.225	-2.285	-3.406	-4.793	-5.889	
EFF-A = 0.8407	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8488	V-BAR	474.920	526.278	575.057	570.802	564.967	528.231	490.720	
	VZ-BAR	456.895	508.498	559.368	555.289	548.933	512.769	476.533	
	V-THET-BAR	129.599	135.619	133.409	132.171	133.640	126.873	117.143	
IGV,ROTOR,STATOR	MACH-BAR	0.407	0.453	0.497	0.493	0.486	0.452	0.418	
----------------	EFF-POLY	0.796	0.837	0.855	0.813	0.806	0.725	0.633	
PR = 1.4423	INCID-H	-2.8	-1.9	-1.9	-2.7	-1.3	-0.9	-2.4	
TR = 1.1319	DEVIATION	15.1	13.6	12.5	13.0	14.3	15.9	16.8	
EFF-A = 0.8386	OMEGA-BAR	0.142	0.101	0.077	0.094	0.093	0.126	0.179	
EFF-P = 0.8446	LOSS PAR	0.049	0.035	0.029	0.036	0.038	0.053	0.077	
	D-FACTOR	0.596	0.535	0.485	0.476	0.472	0.497	0.527	
	TURNING	37.0	35.8	35.6	34.4	36.5	38.8	38.6	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 18)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.259	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=34198.0	P-STATIC	13.635	13.636	13.642	13.653	13.671	13.693	13.707	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.611	-4.223	-5.770	-7.288	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	363.049	362.883	361.864	359.828	356.753	352.653	350.164	
	VZ-BAR	363.049	362.883	361.864	359.828	356.753	352.653	350.164	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.001	0.000	
	MACH-BAR	0.329	0.328	0.327	0.326	0.323	0.319	0.317	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.646	14.649	14.660	14.681	14.681	14.679	14.677	14.671
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.258	13.261	13.270	13.285	13.301	13.319	13.328	
	BETABAR	8.366	10.129	11.679	12.151	11.891	9.630	5.716	
	EPSILON	-0.000	-0.900	-2.542	-4.161	-5.724	-7.288	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	418.123	418.062	418.038	418.854	416.320	413.179	411.476	
	VZ-BAR	413.674	411.539	409.383	409.470	407.386	407.342	409.429	
	V-THET-BAR	60.832	73.517	84.626	88.761	85.784	69.115	40.983	
	MACH-BAR	0.380	0.380	0.380	0.380	0.378	0.375	0.374	
	INCID-B	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.6	-3.5	-4.4	-6.0	-9.6	-14.2	
	OMEGABAR	0.046	0.043	0.033	0.013	0.013	0.015	0.018	
	TURNING	-8.4	-10.1	-11.7	-12.2	-11.9	-9.6	-5.7	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.646	14.649	14.660	14.681	14.681	14.679	14.677	14.671
WCOR= 3.265	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=34198.0	P-STATIC	12.352	12.362	12.371	12.378	12.387	12.391	12.387	
	BETABAR	6.414	7.850	9.144	9.597	9.432	7.641	4.549	
	EPSILON	-1.170	-1.823	-3.280	-4.860	-6.242	-6.810	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	544.078	543.195	543.180	544.534	543.396	542.674	542.949	
	VZ-BAR	540.672	538.098	536.276	536.914	536.050	537.848	541.239	
	V-THET-BAR	60.783	74.187	86.323	90.778	89.045	72.155	43.065	
	MACH-BAR	0.499	0.498	0.498	0.500	0.499	0.498	0.498	
	U-WHEEL	749.369	771.675	816.291	860.906	905.523	950.139	972.446	
	V-BAR-PR	875.487	880.934	905.789	938.820	976.727	1029.633	1075.494	
	BETABAR-PR	51.861	52.350	53.696	55.116	56.713	58.507	59.785	
	V-THET-B-P	-688.586	-697.488	-729.968	-770.129	-816.478	-877.983	-929.381	
	MACH-BAR-P	0.803	0.808	0.831	0.861	0.896	0.945	0.987	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	21.321	21.683	22.061	22.080	21.732	21.379	21.071	21.785
ROTOR	T-TOTAL	586.39	586.16	586.60	585.47	588.59	592.67	595.47	587.91
------	P-STATIC	15.675	15.830	16.179	16.497	16.776	17.043	17.172	
PR = 1.4849	BETABAR	52.465	51.268	50.257	48.923	52.154	54.664	55.493	
TR = 1.1334	EPSILON	-2.886	-2.468	-3.256	-4.712	-5.924	-6.507	-6.418	
EFF-A = 0.8985	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.9019	V-BAR	769.901	778.050	773.029	749.706	710.015	668.157	637.359	
	VZ-BAR	469.056	486.811	494.223	492.610	435.629	386.446	361.069	
	V-THET-BAR	610.520	606.935	594.402	565.151	560.660	545.060	525.220	
	MACH-BAR	0.678	0.686	0.681	0.659	0.619	0.578	0.549	
	U-WHEEL	740.565	762.289	805.741	849.193	892.645	936.097	957.823	
	V-BAR-PR	486.750	511.016	537.555	568.657	547.735	549.813	563.485	
	BETABAR-PR	15.496	17.695	23.148	29.967	37.311	45.336	50.150	
	V-THET-B-P	-130.046	-155.354	-211.339	-284.042	-331.984	-391.037	-432.602	
	MACH-BAR-P	0.428	0.450	0.473	0.500	0.478	0.476	0.485	
	D-FACTOR	0.662	0.636	0.618	0.596	0.642	0.669	0.675	
	TURNING	36.4	34.7	30.5	25.1	19.4	13.2	9.6	
	INCID-B	-5.5	-3.8	-1.6	-0.4	-0.2	-0.1	0.0	
	DEVIATION	27.4	21.4	14.5	12.3	12.1	14.1	16.3	
	OMEGABAR-P	0.150	0.100	0.059	0.040	0.117	0.193	0.243	
	LOSS PAR	0.051	0.034	0.020	0.014	0.039	0.060	0.070	
	PT-RATIO	1.456	1.480	1.505	1.504	1.480	1.456	1.436	1.4849
	EFF-AD	0.868	0.912	0.946	0.961	0.880	0.795	0.735	0.8985
	EFF-POLY	0.875	0.916	0.949	0.963	0.887	0.806	0.749	0.9019
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	21.321	21.675	22.056	22.084	21.740	21.384	21.071	21.785
	T-TOTAL	586.39	586.16	586.61	585.47	588.50	592.62	595.47	587.91
	P-STATIC	15.713	15.814	16.080	16.358	16.612	16.871	16.993	
	BETABAR	52.855	51.309	49.851	48.293	51.165	53.497	54.112	
	EPSILON	-0.113	-1.012	-2.638	-3.904	-5.221	-6.876	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	766.997	778.815	780.022	760.282	723.177	682.788	652.965	
	VZ-BAR	463.138	486.854	502.930	505.830	453.486	406.172	382.767	
	V-THET-BAR	611.382	607.874	596.228	567.596	563.325	548.837	529.011	
	MACH-BAR	0.675	0.686	0.687	0.669	0.632	0.592	0.563	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	20.542	21.070	21.579	21.526	21.232	20.819	20.395	21.235
ROTOR PLUS STATOR	T-TOTAL	586.39	586.16	586.62	585.46	588.30	592.52	595.47	587.91
----------	P-STATIC	18.251	18.257	18.249	18.218	18.175	18.121	18.090	
PR = 1.4474	BETABAR	16.176	15.265	13.729	13.692	13.922	14.340	14.373	
TR = 1.1334	EPSILON	0.450	-0.031	-1.199	-2.261	-3.321	-4.716	-5.489	
EFF-A = 0.8351	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8435	V-BAR	483.803	531.430	574.073	572.204	554.186	526.152	490.919	
	VZ-BAR	464.650	512.689	557.672	555.943	537.906	509.759	475.553	
	V-THET-BAR	134.780	139.868	136.240	135.442	133.338	130.310	121.863	
IGV,ROTOR,STATOR	MACH-BAR	0.415	0.457	0.495	0.498	0.477	0.450	0.417	
----------	EFF-POLY	0.800	0.834	0.851	0.807	0.799	0.731	0.656	
PR = 1.4451	INCID-B	-2.8	-1.3	-1.0	-2.2	-0.3	-0.1	-0.7	
TR = 1.1334	DEVIATION	15.4	14.0	12.8	13.3	14.6	16.3	17.3	
EFF-A = 0.8335	OMEGA-BAR	0.139	0.103	0.080	0.097	0.099	0.125	0.166	
EFF-P = 0.8399	LOSS PAR	0.047	0.036	0.030	0.038	0.040	0.052	0.071	
	D-FACTOR	0.589	0.536	0.490	0.477	0.485	0.500	0.529	
	TURNING	36.7	36.0	36.1	34.6	37.2	39.2	39.7	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 19)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.182	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=34309.0	P-STATIC	13.711	13.712	13.717	13.728	13.743	13.764	13.777	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.628	-4.228	-5.782	-7.290	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	349.401	389.264	348.309	346.405	383.532	339.625	337.267	
	VZ-BAR	349.401	349.264	348.309	346.405	383.532	339.625	337.267	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.316	0.316	0.315	0.313	0.311	0.307	0.305	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.649	14.652	14.663	14.683	14.684	14.682	14.680	14.674
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.335	13.338	13.347	13.360	13.375	13.393	13.402	
	BETABAR	8.369	10.135	11.683	12.150	11.985	9.634	5.713	
	EPSILON	-0.000	-0.879	-2.563	-4.135	-5.730	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	406.316	406.363	406.476	407.308	404.910	401.801	400.055	
	VZ-BAR	401.989	400.013	398.058	398.185	396.084	396.119	398.068	
	V-THET-BAR	59.139	71.508	82.310	85.725	84.080	67.242	39.821	
	MACH-BAR	0.369	0.369	0.369	0.370	0.367	0.365	0.363	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.6	-3.5	-4.4	-5.9	-9.6	-14.2	
	OMEGABAR	0.046	0.043	0.032	0.012	0.011	0.014	0.016	
	TURNING	-8.4	-10.1	-11.7	-12.1	-12.0	-9.6	-5.7	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.649	14.652	14.663	14.683	14.684	14.682	14.680	14.674
WCOR= 3.187	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=34309.0	P-STATIC	12.488	12.496	12.505	12.513	12.523	12.528	12.524	
	BETABAR	6.437	7.876	9.176	9.631	9.544	7.676	4.565	
	EPSILON	-1.170	-1.843	-3.395	-5.014	-6.336	-6.896	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	527.112	526.354	526.392	527.603	526.379	525.523	525.796	
	VZ-BAR	523.789	521.383	519.655	520.166	519.093	520.802	524.129	
	V-THET-BAR	59.092	72.123	83.946	88.273	87.275	70.190	41.844	
	MACH-BAR	0.483	0.482	0.482	0.483	0.482	0.481	0.482	
	U-WHEEL	751.802	774.179	818.940	863.701	908.462	953.222	975.602	
	V-BAR-PR	868.448	874.487	900.148	933.740	971.501	1025.180	1070.801	
	BETABAR-PR	52.905	53.400	54.738	56.185	57.701	59.467	60.694	
	V-THET-B-P	-692.709	-702.057	-734.998	-775.428	-821.187	-883.032	-933.758	
	MACH-BAR-P	0.796	0.801	0.825	0.855	0.890	0.939	0.981	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	21.571	21.861	22.203	22.192	21.912	21.642	21.042	21.957
ROTOR	T-TOTAL	587.58	587.23	587.21	586.32	589.74	593.74	597.28	588.85
-----	P-STATIC	15.946	16.110	16.461	16.783	17.068	17.337	17.463	
PR = 1.4964	BETABAR	53.813	52.823	51.512	50.514	53.967	55.885	61.030	
TR = 1.1352	EPSILON	-2.886	-2.640	-3.268	-4.692	-5.962	-6.467	-6.418	
EFF-A = 0.9048	K-BAR	0.995	0.995	0.995	0.995	0.994	0.995	0.995	
EFF-P = 0.9079	V-BAR	764.062	767.612	760.279	735.107	698.617	661.692	610.092	
	VZ-BAR	451.117	463.847	473.157	467.447	410.966	371.156	295.497	
	V-THET-BAR	616.671	611.611	595.100	567.341	564.952	547.756	533.754	
	MACH-BAR	0.671	0.675	0.668	0.648	0.608	0.572	0.523	
	U-WHEEL	742.969	764.763	808.357	851.949	895.543	939.135	960.931	
	V-BAR-PR	468.463	488.500	519.034	547.280	527.455	539.508	519.422	
	BETABAR-PR	15.641	18.268	24.257	31.335	38.813	46.523	55.327	
	V-THET-B-P	-126.298	-153.153	-213.257	-284.609	-330.590	-391.379	-427.177	
	MACH-BAR-P	0.412	0.430	0.456	0.480	0.459	0.466	0.445	
	D-FACTOR	0.684	0.662	0.638	0.619	0.664	0.680	0.719	
	TURNING	37.3	35.1	30.5	28.8	18.9	12.9	5.4	
	INCID-M	-4.5	-2.7	-0.5	0.6	0.8	0.8	0.9	
	DEVIATION	27.5	22.0	15.7	13.7	13.6	15.3	21.5	
	OMEGABAR-P	0.140	0.097	0.053	0.041	0.115	0.183	0.268	
	LOSS PAR	0.047	0.033	0.018	0.014	0.038	0.055	0.068	
	PT-RATIO	1.473	1.492	1.514	1.511	1.492	1.474	1.433	1.4964
	EFF-AD	0.880	0.917	0.953	0.961	0.885	0.811	0.715	0.9048
	EFF-POLY	0.887	0.921	0.955	0.963	0.891	0.821	0.729	0.9079
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	21.571	21.855	22.198	22.196	21.913	21.656	21.042	21.957
	T-TOTAL	587.58	587.23	587.23	586.32	589.66	593.64	597.28	588.85
	P-STATIC	15.971	16.086	16.371	16.663	16.918	17.177	17.301	
	BETABAR	54.121	52.809	51.137	49.942	53.055	54.688	59.369	
	EPSILON	-0.113	-1.000	-2.820	-4.104	-5.537	-6.825	-7.979	
	K-BAR	0.995	0.995	0.995	0.995	0.995	0.995	0.995	
	V-BAR	762.160	769.071	766.660	748.353	710.409	675.885	624.788	
	VZ-BAR	446.688	464.879	481.045	479.034	426.992	390.702	318.338	
	V-THET-BAR	617.542	612.655	596.957	569.726	567.765	551.497	537.607	
	MACH-BAR	0.669	0.676	0.674	0.653	0.619	0.585	0.536	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	20.807	21.248	21.686	21.578	21.368	20.829	20.458	21.331
ROTOR PLUS STATOR	T-TOTAL	587.58	587.24	587.24	586.30	589.44	593.49	597.28	588.85
----------	P-STATIC	18.539	18.549	18.548	18.519	18.476	18.421	18.391	
PR = 1.4537	BETABAR	16.599	15.831	14.123	13.977	14.187	14.652	14.994	
TR = 1.1352	EPSILON	0.450	-0.071	-1.150	-2.209	-3.325	-4.746	-5.489	
EFF-A = 0.8341	K-BAR	0.915	0.915	0.915	0.915	0.915	0.915	0.915	
EFF-P = 0.8427	V-BAR	478.482	517.708	555.076	548.675	536.841	495.937	463.811	
	VZ-BAR	458.584	498.076	538.297	532.431	520.469	479.810	448.020	
	V-THET-BAR	136.684	141.201	135.438	132.520	131.571	125.441	119.997	
IGV,ROTOR,STATOR	MACH-BAR	0.409	0.444	0.478	0.472	0.461	0.423	0.393	
----------	EFF-POLY	0.804	0.833	0.841	0.788	0.786	0.686	0.684	
PR = 1.4516	INCID-M	-1.5	0.2	0.3	-0.6	1.5	1.1	4.6	
TR = 1.1352	DEVIATION	15.8	14.5	13.2	13.6	14.8	16.6	17.9	
EFF-A = 0.8332	OMEGA-BAR	0.135	0.106	0.088	0.112	0.109	0.185	0.156	
EFF-P = 0.8395	LOSS PAR	0.046	0.037	0.032	0.043	0.044	0.077	0.067	
	D-FACTOR	0.596	0.550	0.507	0.500	0.503	0.545	0.558	
	TURNING	37.5	37.0	37.0	36.0	38.9	40.0	44.4	

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Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 20)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.117	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=34171.0	P-STATIC	13.754	13.754	13.760	13.770	13.785	13.805	13.817	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.615	-4.207	-5.770	-7.284	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	341.596	341.456	340.510	338.628	335.784	331.996	329.681	
	VZ-BAR	341.596	341.456	340.510	338.628	335.784	331.996	329.681	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.001	0.000	0.000	
	MACH-BAR	0.309	0.309	0.308	0.306	0.303	0.300	0.298	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.652	14.655	14.665	14.684	14.685	14.683	14.682	14.675
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.366	13.368	13.378	13.391	13.406	13.424	13.433	
	BETABAR	8.371	10.130	11.681	12.143	11.973	9.720	5.807	
	EPSILON	-0.000	-0.879	-2.547	-4.163	-5.714	-7.268	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	401.754	401.805	401.885	402.553	400.186	397.088	395.357	
	VZ-BAR	397.474	395.534	393.560	393.547	391.480	391.373	393.328	
	V-THET-BAR	58.486	70.666	81.369	84.678	83.018	67.039	40.000	
	MACH-BAR	0.365	0.365	0.365	0.365	0.363	0.360	0.359	
	INCID-H	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.6	-3.5	-4.4	-5.9	-9.5	-14.1	
	OMEGABAR	0.046	0.042	0.031	0.011	0.010	0.012	0.014	
	TURNING	-8.4	-10.1	-11.7	-12.1	-12.0	-9.7	-5.8	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.652	14.655	14.666	14.685	14.685	14.683	14.682	14.675
WCOR= 3.121	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=34171.0	P-STATIC	12.541	12.548	12.556	12.565	12.577	12.586	12.582	
	BETABAR	6.446	7.879	9.182	9.636	9.549	7.762	4.650	
	EPSILON	-1.170	-1.938	-3.596	-5.381	-6.979	-7.442	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	520.512	519.910	520.011	521.006	519.491	518.179	518.507	
	VZ-BAR	517.221	514.995	513.348	513.655	512.294	513.420	516.801	
	V-THET-BAR	58.439	71.272	82.974	87.209	86.178	69.982	42.032	
	MACH-BAR	0.477	0.476	0.476	0.477	0.476	0.474	0.475	
	U-WHEEL	748.778	771.066	815.646	860.226	904.807	949.388	971.678	
	V-BAR-PR	862.604	868.870	894.618	928.119	965.716	1018.316	1063.638	
	BETABAR-PR	53.158	53.650	54.982	56.396	57.961	59.721	60.930	
	V-THET-B-P	-690.338	-699.794	-732.672	-773.017	-818.629	-879.406	-929.646	
	MACH-BAR-P	0.790	0.795	0.819	0.850	0.884	0.932	0.974	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	21.747	21.988	22.270	22.270	21.896	21.266	20.983	21.958
ROTOR	T-TOTAL	588.26	587.86	587.62	586.70	589.54	594.16	598.58	589.05
-----	P-STATIC	15.933	16.103	16.468	16.796	17.077	17.334	17.458	
PR = 1.4962	BETABAR	53.574	52.899	51.738	50.644	54.108	59.850	63.742	
TR = 1.1356	EPSILON	-2.885	-2.352	-3.406	-4.953	-6.451	-6.817	-6.418	
EFF-A = 0.9022	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9052	V-BAR	775.235	775.462	763.647	738.759	696.795	636.309	606.719	
	VZ-BAR	460.319	467.770	472.893	468.485	408.538	319.675	268.419	
	V-THET-BAR	623.776	618.491	599.606	571.211	564.416	550.078	544.114	
	MACH-BAR	0.682	0.682	0.671	0.648	0.607	0.548	0.519	
	U-WHEEL	739.981	761.687	805.105	848.522	891.940	935.357	957.066	
	V-BAR-PR	474.760	489.214	515.631	544.488	523.731	500.871	492.523	
	BETABAR-PR	14.168	17.019	23.486	30.624	38.728	50.325	56.976	
	V-THET-B-P	-116.205	-143.196	-205.499	-277.312	-327.524	-385.280	-412.953	
	MACH-BAR-P	0.417	0.430	0.453	0.477	0.456	0.432	0.422	
	D-FACTOR	0.677	0.662	0.642	0.622	0.667	0.718	0.747	
	TURNING	39.0	36.6	31.5	25.8	19.2	9.4	4.0	
	INCID-H	-4.2	-2.5	-0.3	0.8	1.1	1.1	1.1	
	DEVIATION	26.0	20.8	14.9	13.0	13.5	19.1	23.1	
	OMEGABAR-P	0.131	0.092	0.052	0.038	0.114	0.224	0.291	
	LOSS PAR	0.044	0.032	0.018	0.013	0.038	0.063	0.071	
	PT-RATIO	1.484	1.500	1.518	1.516	1.491	1.448	1.429	1.4962
	EFF-AD	0.891	0.922	0.954	0.964	0.885	0.768	0.697	0.9022
	EFF-POLY	0.897	0.926	0.956	0.966	0.892	0.779	0.712	0.9052
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	21.747	21.982	22.265	22.277	21.913	21.274	20.983	21.958
	T-TOTAL	588.26	587.87	587.63	586.64	589.44	594.05	598.58	589.05
	P-STATIC	15.965	16.092	16.394	16.694	16.942	17.178	17.302	
	BETABAR	53.925	52.972	51.472	50.141	53.183	58.369	61.952	
	EPSILON	-0.113	-1.292	-2.801	-3.946	-5.119	-6.876	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	772.855	775.983	768.832	746.799	708.371	650.376	620.971	
	VZ-BAR	455.093	467.295	478.895	478.629	424.525	341.146	291.988	
	V-THET-BAR	624.656	619.500	601.464	573.255	567.030	553.647	548.041	
	MACH-BAR	0.679	0.683	0.676	0.655	0.617	0.561	0.532	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	20.983	21.360	21.711	21.599	21.390	20.833	20.469	21.369
ROTOR PLUS STATOR	T-TOTAL	588.26	587.89	587.66	586.63	589.02	593.51	598.58	589.05
----------	P-STATIC	18.531	18.541	18.538	18.508	18.466	18.415	18.388	
PR = 1.4561	BETABAR	16.896	16.042	14.325	13.995	14.290	14.768	15.225	
TR = 1.1356	EPSILON	0.450	0.042	-1.015	-1.879	-2.790	-4.344	-5.489	
EFF-A = 0.8357	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.8442	V-BAR	496.476	529.017	558.227	551.616	539.435	496.964	465.814	
	VZ-BAR	475.046	508.420	540.870	535.243	522.748	480.557	449.465	
	V-THET-BAR	144.289	146.163	138.113	133.402	133.149	126.683	122.327	
IGV,ROTOR,STATOR	MACH-BAR	0.425	0.454	0.480	0.475	0.463	0.424	0.394	
----------	EFF-POLY	0.805	0.830	0.828	0.768	0.798	0.796	0.709	
PR = 1.4542	INCID-H	-1.7	0.3	0.6	-0.4	1.7	4.7	7.2	
TR = 1.1356	DEVIATION	16.1	14.7	13.4	13.6	14.9	16.7	18.2	
EFF-A = 0.8351	OMEGA-BAR	0.132	0.106	0.094	0.121	0.105	0.108	0.140	
EFF-P = 0.8413	LOSS PAR	0.045	0.037	0.035	0.047	0.042	0.045	0.059	
	D-FACTOR	0.578	0.540	0.505	0.500	0.499	0.528	0.558	
	TURNING	37.0	36.9	37.1	36.1	38.9	43.6	46.7	

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Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 21)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.234	5.606	5.998	6.391	6.783	6.979	
	I-TOTAL	14.698	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.004	I-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=34206.0	I-STATIC	13.807	13.807	13.812	13.822	13.836	13.855	13.866	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.615	-4.233	-5.768	-7.284	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	331.594	331.468	330.543	328.732	326.009	322.350	320.116	
	V2-BAR	331.594	331.468	330.543	328.732	326.009	322.350	320.116	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.001	0.000	0.000	
	MACH-BAR	0.300	0.299	0.299	0.297	0.294	0.291	0.289	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	I-TOTAL	14.656	14.658	14.669	14.687	14.688	14.686	14.685	14.678
	I-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	I-STATIC	13.471	13.474	13.482	13.495	13.510	13.527	13.535	
	BETABAR	8.251	10.122	11.767	12.127	11.934	9.679	5.890	
	EPSILON	-0.000	-0.879	-2.547	-4.148	-5.702	-7.260	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	385.014	385.069	385.207	385.708	383.410	380.395	378.715	
	V2-BAR	381.029	379.067	377.111	377.101	375.123	374.967	376.716	
	V-THET-BAR	55.253	67.671	78.556	81.031	79.285	63.953	38.860	
	MACH-BAR	0.349	0.349	0.349	0.350	0.347	0.345	0.343	
	INCID-P	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.8	-3.6	-3.4	-4.4	-5.9	-9.6	-14.0	
	OMEGABAR	0.044	0.041	0.029	0.009	0.008	0.010	0.012	
	TURNING	-8.3	-10.1	-11.8	-12.1	-11.9	-9.7	-5.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	I-TOTAL	14.656	14.658	14.669	14.687	14.688	14.686	14.685	14.678
	I-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR= 3.007	I-STATIC	12.721	12.728	12.737	12.747	12.762	12.773	12.768	
WCOR=34206.0	BETABAR	6.378	7.903	9.289	9.660	9.565	7.773	4.740	
	EPSILON	-1.170	-2.079	-3.949	-5.922	-7.739	-8.284	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	497.028	496.454	496.467	497.182	495.272	493.623	494.137	
	V2-BAR	493.953	491.731	489.957	490.151	488.386	489.076	492.448	
	V-THET-BAR	55.209	68.262	80.134	83.431	82.299	66.763	40.834	
	MACH-BAR	0.454	0.454	0.454	0.454	0.452	0.451	0.451	
	U-WHEEL	749.544	771.855	816.482	861.108	905.734	950.360	972.674	
	V-BAR-ER	852.109	858.397	884.462	919.249	957.380	1009.927	1053.959	
	BETABAR-ER	54.572	55.051	56.360	57.778	59.327	61.034	62.745	
	V-THET-R-F	-694.335	-703.593	-736.348	-777.677	-823.435	-883.598	-931.840	
	MACH-BAR-R	0.779	0.784	0.808	0.840	0.875	0.923	0.963	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	I-TOTAL	22.012	22.155	22.369	22.352	21.987	21.294	20.821	22.077
ROTOR	I-TOTAL	589.20	588.90	588.76	588.24	592.08	597.30	600.65	590.65
-----	I-STATIC	16.006	16.176	16.523	16.847	17.124	17.384	17.513	
PR = 1.5040	BETABAR	53.093	53.720	52.212	51.325	55.450	62.584	70.283	
TR = 1.1367	EPSILON	-2.885	-2.724	-3.672	-5.322	-6.895	-7.038	-6.418	
EFF-A = 0.8948	K-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
EFF-I = 0.8977	V-BAR	784.836	779.790	765.827	740.589	700.254	635.548	589.951	
	V2-BAR	471.312	467.981	469.244	462.805	397.132	292.807	199.032	
	V-THET-BAR	627.560	623.751	605.223	578.168	576.750	563.840	555.364	
	MACH-BAR	0.690	0.686	0.672	0.649	0.608	0.546	0.503	
	U-WHEEL	740.739	762.467	805.930	849.392	892.853	936.316	958.047	
	V-BAR-RI	484.711	488.110	510.395	536.468	507.579	474.266	449.185	
	BETABAR-ER	13.503	16.510	23.154	30.372	38.519	51.858	63.698	
	V-THET-R-F	-113.179	-138.716	-200.706	-271.224	-316.103	-372.475	-402.683	
	MACH-BAR-I	0.426	0.429	0.448	0.470	0.441	0.407	0.383	
	D-FACTOR	0.665	0.662	0.648	0.633	0.689	0.752	0.791	
	TURNING	41.1	38.5	33.2	27.4	20.8	9.2	-1.6	
	INCID-P	-2.8	-1.1	1.1	2.2	2.4	2.4	2.4	
	DEVIATION	25.4	20.3	14.6	12.7	13.3	20.6	29.8	
	OMEGABAR-P	0.116	0.091	0.060	0.052	0.140	0.260	0.333	
	LOSS PAR	0.039	0.031	0.021	0.018	0.046	0.071	0.066	
	AI-RATIO	1.502	1.511	1.525	1.522	1.497	1.450	1.418	1.5040
	EFF-AD	0.907	0.925	0.948	0.951	0.864	0.739	0.664	0.8948
	EFF-POLY	0.912	0.930	0.951	0.954	0.871	0.752	0.680	0.8977
STATOR LEADING EDGE	DIAMETER	4.956	5.096	5.381	5.665	5.948	6.231	6.373	
	I-TOTAL	22.012	22.151	22.366	22.359	22.007	21.316	20.821	22.077
	I-TOTAL	589.20	588.91	588.80	588.78	591.89	597.15	600.65	590.65
	I-STATIC	16.028	16.149	16.460	16.760	17.008	17.255	17.384	
	BETABAR	53.360	53.072	52.041	50.924	54.579	61.161	68.272	
	EPSILON	-0.113	-0.924	-2.577	-4.239	-5.452	-6.909	-7.979	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	763.213	781.511	770.249	747.403	710.415	648.153	602.153	
	V2-BAR	467.415	469.536	473.776	471.132	411.756	312.797	222.913	
	V-THET-BAR	628.447	624.736	607.304	580.209	578.888	567.452	559.372	
	MACH-BAR	0.689	0.687	0.676	0.655	0.618	0.558	0.514	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	I-TOTAL	21.277	21.517	21.755	21.634	21.422	20.836	20.439	21.427
ROTOR PLUS STATOR	I-TOTAL	589.20	588.93	588.82	588.82	590.98	596.25	600.65	590.65
----------	I-STATIC	18.758	18.766	18.765	18.738	18.700	18.653	18.629	
PR = 1.4596	BETABAR	16.944	16.022	14.109	13.586	13.955	14.132	14.928	
TR = 1.1367	EPSILON	0.450	0.082	-0.789	-1.476	-2.284	-3.815	-5.489	
EFF-A = 0.8229	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
EFF-I = 0.8321	V-BAR	500.300	520.731	540.867	533.076	519.993	472.212	434.306	
	V2-BAR	478.582	500.506	524.550	518.160	504.647	457.922	419.648	
	V-THET-BAR	145.805	143.703	131.842	125.220	125.397	115.287	111.880	
IGV,ROTOR,STATOR	MACH-BAR	0.426	0.446	0.464	0.458	0.445	0.401	0.366	
----------	EFF-POLY	0.821	0.836	0.824	0.776	0.814	0.816	0.788	
PR = 1.4582	INCID-M	-2.3	0.4	1.2	0.4	3.1	7.5	13.5	
TR = 1.1367	DEVIATION	16.2	14.7	13.2	13.2	14.6	16.1	17.9	
EFF-A = 0.8233	OMEGA-BAR	0.123	0.106	0.104	0.129	0.117	0.118	0.111	
EFF-I = 0.8297	LOSS PAR	0.042	0.037	0.038	0.050	0.047	0.049	0.047	
	D-FACTOR	0.580	0.557	0.535	0.533	0.539	0.585	0.613	
	TURNING	36.4	37.1	37.9	37.3	40.6	47.0	53.3	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 22)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.179	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29147.0	P-STATIC	13.754	13.755	13.760	13.771	13.786	13.806	13.818	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.607	-4.225	-5.784	-7.316	-8.067	
	K-BAR	1.010	1.010	1.010	1.010	1.010	1.010	1.010	
	V-BAR	341.485	341.339	340.373	338.450	335.563	331.720	329.413	
	VZ-BAR	341.485	341.339	340.373	338.450	335.563	331.720	329.413	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.001	0.000	
	MACH-BAR	0.309	0.309	0.308	0.306	0.303	0.300	0.298	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.649	14.652	14.663	14.683	14.684	14.682	14.680	14.674
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.307	13.309	13.318	13.332	13.347	13.365	13.374	
	BETABAR	8.347	10.104	11.652	12.135	11.994	9.639	5.724	
	EPSILON	-0.000	-0.904	-2.566	-4.186	-5.757	-7.361	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	410.831	410.893	410.985	411.742	409.388	406.295	404.592	
	VZ-BAR	406.479	404.513	402.514	402.541	400.451	400.544	402.575	
	V-THET-BAR	59.640	72.081	83.008	86.557	85.072	68.026	40.349	
	MACH-BAR	0.373	0.373	0.373	0.374	0.372	0.369	0.367	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.7	-3.5	-4.4	-5.9	-9.6	-14.2	
	OMEGABAR	0.048	0.045	0.034	0.012	0.012	0.014	0.016	
	TURNING	-8.3	-10.1	-11.7	-12.1	-12.0	-9.6	-5.7	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.649	14.652	14.663	14.683	14.684	14.682	14.680	14.674
WCOR= 3.183	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29147.0	P-STATIC	12.439	12.448	12.459	12.465	12.469	12.470	12.466	
	BETABAR	6.415	7.852	9.157	9.617	9.531	7.657	4.561	
	EPSILON	-1.170	-1.788	-3.088	-4.338	-5.584	-6.563	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	W-BAR	533.394	532.515	532.314	533.757	533.297	532.946	533.231	
	VZ-BAR	530.054	527.515	525.530	526.255	525.935	528.182	531.542	
	V-THET-BAR	59.592	72.750	84.709	89.174	88.307	71.007	42.398	
	MACH-BAR	0.489	0.488	0.488	0.489	0.489	0.488	0.489	
	U-WHEEL	638.688	657.699	695.725	733.752	771.778	809.804	828.817	
	V-BAR-PR	785.054	787.681	805.934	832.125	862.409	908.191	949.206	
	BETABAR-PR	47.532	47.955	49.301	50.770	52.421	54.437	55.945	
	V-THET-B-P	-579.096	-584.949	-611.016	-644.578	-683.471	-738.796	-786.419	
	MACH-BAR-P	0.720	0.722	0.739	0.763	0.790	0.832	0.870	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.955	19.202	19.428	19.403	19.350	18.790	18.235	19.219
ROTOR	T-TOTAL	564.35	563.68	565.25	563.74	562.84	565.89	567.98	564.32
	P-STATIC	14.107	14.183	14.375	14.587	14.780	14.953	15.038	
PR = 1.3096	BETABAR	41.885	40.782	41.232	39.634	38.227	40.478	42.119	
TR = 1.0880	EPSILON	-2.886	-2.799	-3.367	-4.310	-5.408	-6.296	-6.418	
EFF-A = 0.9156	K-BAR	0.865	0.865	0.865	0.865	0.865	0.865	0.865	
EFF-P = 0.9146	W-BAR	740.765	749.300	748.278	728.037	707.807	655.411	604.646	
	VZ-BAR	551.488	567.371	562.742	560.672	556.628	498.541	448.497	
	V-THET-BAR	494.563	489.427	493.195	464.408	437.978	425.464	405.522	
	MACH-BAR	0.663	0.672	0.670	0.651	0.632	0.581	0.536	
	U-WHEEL	631.185	649.700	686.734	723.768	760.803	797.837	816.353	
	V-BAR-PR	568.159	589.585	595.125	617.800	642.975	622.261	608.220	
	BETABAR-PR	13.914	15.772	18.978	24.820	30.139	36.757	42.490	
	V-THET-B-P	-136.621	-160.273	-193.539	-259.360	-322.824	-372.373	-410.832	
	MACH-BAR-P	0.509	0.529	0.533	0.553	0.574	0.591	0.535	
	D-FACTOR	0.469	0.440	0.453	0.437	0.424	0.487	0.549	
	TURNING	33.6	32.2	30.3	25.9	22.3	17.7	13.5	
	INCID-M	-9.9	-8.2	-6.0	-4.8	-4.5	-4.2	-3.8	
	DEVIATION	25.8	19.5	10.4	7.2	4.9	5.5	8.6	
	OMEGABAR-P	0.125	0.069	0.063	0.039	0.028	0.151	0.243	
	LOSS PAR	0.043	0.024	0.022	0.014	0.010	0.053	0.080	
	PT-RATIO	1.294	1.310	1.325	1.321	1.318	1.280	1.242	1.309d
	EFF-AD	0.869	0.927	0.933	0.955	0.965	0.803	0.673	0.9132
	EFF-POLY	0.873	0.929	0.935	0.956	0.966	0.810	0.683	0.9146
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.955	19.198	19.426	19.403	19.355	18.800	18.235	19.219
	T-TOTAL	564.35	563.68	565.24	563.79	562.82	565.85	567.98	564.32
	P-STATIC	14.133	14.144	14.241	14.396	14.557	14.708	14.778	
	BETABAR	42.111	40.664	40.646	38.854	37.283	39.149	40.369	
	EPSILON	-0.113	-0.823	-2.414	-3.931	-5.406	-7.024	-7.979	
	K-BAR	0.865	0.865	0.865	0.865	0.865	0.865	0.865	
	V-BAR	738.564	752.311	759.270	744.087	726.982	678.512	630.613	
	VZ-BAR	547.898	570.666	576.094	579.444	578.424	526.193	480.401	
	V-THET-BAR	495.262	490.209	494.576	466.794	440.374	428.366	408.449	
	MACH-BAR	0.661	0.675	0.681	0.667	0.651	0.603	0.556	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.927	18.511	18.951	18.956	19.080	18.221	17.016	18.719
ROTOR PLUS STATOR	T-TOTAL	564.35	563.68	565.24	563.78	562.83	565.90	567.98	564.32
	P-STATIC	15.649	15.657	15.649	15.614	15.565	15.487	15.438	
PR = 1.2757	BETABAR	12.366	12.127	11.722	12.071	12.199	11.028	8.628	
TR = 1.0880	EPSILON	0.450	-0.118	-1.399	-2.603	-3.776	-4.950	-5.489	
EFF-A = 0.8191	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8252	W-BAR	508.166	562.279	601.197	604.268	618.204	555.494	432.510	
	VZ-BAR	496.377	549.733	588.659	590.906	604.244	545.238	427.615	
	V-THET-BAR	108.825	118.115	122.142	126.372	130.634	106.256	64.886	
IGV,ROTOR,STATOR	MACH-BAR	0.445	0.495	0.530	0.534	0.547	0.487	0.375	
	EFF-POLY	0.645	0.734	0.790	0.776	0.822	0.619	0.386	
PR = 1.2739	INCID-M	-13.5	-12.0	-10.2	-11.7	-14.2	-14.3	-14.4	
TR = 1.0880	DEVIATION	11.6	10.8	10.8	11.7	12.8	13.0	11.6	
EFF-A = 0.8162	OMEGA-BAR	0.213	0.136	0.092	0.089	0.057	0.142	0.358	
EFF-P = 0.8204	LOSS PAR	0.074	0.048	0.034	0.035	0.023	0.060	0.154	
	D-FACTOR	0.497	0.432	0.396	0.372	0.329	0.390	0.559	
	TURNING	29.7	28.5	28.9	26.8	25.1	28.1	31.7	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 23)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.101	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29689.0	P-STATIC	13.822	13.823	13.828	13.837	13.851	13.870	13.881	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.005	-4.199	-5.778	-7.316	-8.067	
	K-BAR	1.020	1.020	1.020	1.020	1.020	1.020	1.020	
	V-BAR	328.662	328.520	327.593	325.793	323.051	319.366	317.159	
	VZ-BAR	328.662	328.520	327.593	325.793	323.051	319.366	317.159	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.001	0.000	
	MACH-BAR	0.297	0.297	0.296	0.294	0.292	0.288	0.286	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.652	14.655	14.666	14.685	14.686	14.684	14.682	14.676
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.398	13.401	13.409	13.422	13.436	13.453	13.461	
	BETABAR	8.530	10.083	11.629	12.111	11.975	9.732	5.825	
	EPSILON	-0.000	-0.904	-2.555	-4.155	-5.726	-7.321	-8.118	
	K-BAR	0.945	0.945	0.945	0.945	0.944	0.944	0.945	
	V-BAR	396.540	396.617	396.822	397.602	395.375	392.400	390.755	
	VZ-BAR	392.357	390.483	388.676	388.752	386.770	386.739	388.748	
	V-THET-BAR	57.447	69.436	79.990	83.421	82.037	66.329	39.656	
	MACH-BAR	0.360	0.360	0.360	0.361	0.359	0.356	0.354	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.8	-3.7	-3.5	-4.4	-5.9	-7.5	-14.1	
	OMEGABAR	0.048	0.045	0.033	0.011	0.010	0.013	0.015	
	TURNING	-8.3	-10.1	-11.6	-12.1	-12.0	-9.7	-5.8	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.652	14.655	14.666	14.685	14.686	14.684	14.682	14.676
WCOR= 3.105	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29689.0	P-STATIC	12.661	12.616	12.619	12.624	12.628	12.629	12.626	
	BETABAR	6.429	7.870	9.176	9.638	9.559	7.765	4.661	
	EPSILON	-1.170	-1.749	-3.052	-4.313	-5.584	-6.614	-6.637	
	K-BAR	0.945	0.945	0.945	0.945	0.945	0.945	0.945	
	V-BAR	512.674	511.859	511.885	513.333	512.868	512.485	512.754	
	VZ-BAR	509.451	507.036	505.334	506.088	505.748	507.774	511.059	
	V-THET-BAR	57.401	70.081	81.629	85.942	85.165	69.242	41.070	
	MACH-BAR	0.469	0.468	0.468	0.470	0.469	0.469	0.469	
	U-WHEEL	637.417	636.391	634.341	732.292	770.242	808.193	827.166	
	W-BAR-PR	771.984	775.141	794.220	820.914	851.540	896.603	937.117	
	BETABAR-PR	48.706	49.147	50.485	51.939	53.563	55.503	56.951	
	V-THET-B-P	-580.016	-586.309	-612.711	-646.350	-685.077	-738.951	-765.498	
	MACH-BAR-P	0.706	0.709	0.727	0.751	0.779	0.820	0.857	
ROTOR TRAILING EDGE	DIAMETER	4.983	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.980	19.372	19.010	19.509	19.479	19.071	18.485	19.391
ROTOR	T-TOTAL	565.54	565.33	566.25	564.70	564.31	568.12	570.36	565.77
-----	P-STATIC	14.515	14.607	14.832	15.054	15.247	15.419	15.502	
PR = 1.3213	BETABAR	45.454	43.872	43.735	42.468	41.337	44.055	46.869	
TR = 1.0908	EPSILON	-2.886	-2.589	-3.154	-4.348	-5.525	-6.355	-6.418	
EFF-A = 0.9152	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.9163	V-BAR	707.953	725.414	722.658	695.911	676.944	634.156	579.694	
	VZ-BAR	496.613	522.945	522.149	513.329	508.280	455.754	396.320	
	V-THET-BAR	504.532	502.739	499.594	469.871	447.107	440.951	423.055	
	MACH-BAR	0.631	0.648	0.645	0.620	0.602	0.559	0.508	
	U-WHEEL	629.929	648.407	685.368	722.328	759.289	796.249	814.729	
	W-BAR-PR	512.195	542.864	554.257	572.098	596.517	577.896	557.206	
	BETABAR-PR	14.169	15.562	19.584	26.184	31.557	37.940	44.662	
	W-THET-B-P	-125.377	-145.669	-185.773	-252.457	-312.181	-355.298	-391.674	
	MACH-BAR-P	0.456	0.485	0.494	0.510	0.530	0.510	0.488	
	D-FACTOR	0.538	0.499	0.500	0.489	0.477	0.538	0.586	
	TURNING	34.5	33.6	30.9	25.8	22.0	17.6	12.3	
	INCID-M	-8.7	-7.0	-4.8	-3.6	-3.3	-3.1	-2.8	
	DEVIATION	26.0	19.3	11.6	8.5	6.4	6.7	10.6	
	OMEGABAR-P	0.150	0.077	0.053	0.042	0.037	0.152	0.251	
	LOSS PAR	0.051	0.027	0.019	0.015	0.013	0.053	0.080	
	PT-RATIO	1.295	1.322	1.337	1.328	1.326	1.299	1.259	1.3213
	EFF-AD	0.851	0.924	0.946	0.954	0.957	0.815	0.683	0.9152
	EFF-POLY	0.855	0.926	0.947	0.955	0.958	0.821	0.693	0.9163
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.980	19.365	19.616	19.510	19.481	19.082	18.485	19.391
	T-TOTAL	565.54	565.33	566.26	564.74	564.28	568.05	570.36	565.77
	P-STATIC	14.555	14.597	14.735	14.891	15.046	15.201	15.273	
	BETABAR	45.827	43.923	43.293	41.697	40.341	42.051	44.961	
	EPSILON	-0.113	-1.056	-2.768	-3.767	-5.103	-6.526	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	704.456	725.898	730.797	709.924	694.292	655.234	603.015	
	VZ-BAR	490.882	522.849	531.910	530.075	529.190	481.965	426.683	
	V-THET-BAR	505.265	503.528	501.132	472.233	449.443	443.934	426.108	
	MACH-BAR	0.628	0.648	0.653	0.633	0.619	0.579	0.569	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.103	18.690	19.182	19.128	19.189	18.444	17.809	18.913
ROTOR PLUS STATOR	T-TOTAL	565.54	565.33	566.26	564.73	564.28	568.05	570.36	565.77
----------	P-STATIC	16.180	16.188	16.182	16.150	16.106	16.038	16.000	
PR = 1.2887	BETABAR	12.913	12.493	11.913	12.313	12.369	10.764	8.247	
TR = 1.0908	EPSILON	0.450	-0.101	-1.364	-2.609	-3.753	-4.866	-5.489	
EFF-A = 0.8281	K-BAR	0.935	0.935	0.935	0.935	0.935	0.935	0.935	
EFF-P = 0.8342	V-BAR	463.173	522.503	568.076	565.906	575.210	516.857	454.426	
	VZ-BAR	451.459	510.135	555.842	552.887	561.858	507.759	449.726	
	V-THET-BAR	103.508	113.007	117.264	120.683	123.216	96.541	65.184	
IGV,ROTOR,STATOR	MACH-BAR	0.404	0.458	0.499	0.498	0.506	0.451	0.394	
----------	EFF-POLY	0.690	0.743	0.806	0.803	0.816	0.611	0.554	
PR = 1.2671	INCID-M	-9.8	-8.7	-7.5	-8.8	-11.2	-11.0	-9.8	
TR = 1.0908	DEVIATION	12.1	11.2	11.0	12.0	13.0	12.7	11.2	
EFF-A = 0.8263	OMEGA-BAR	0.198	0.142	0.089	0.083	0.066	0.164	0.210	
EFF-P = 0.8301	LOSS PAR	0.069	0.050	0.033	0.032	0.027	0.070	0.092	
	D-FACTOR	0.545	0.476	0.424	0.402	0.370	0.444	0.515	
	TURNING	32.9	31.4	31.4	29.4	28.0	31.9	36.7	

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Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 24)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.046	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29186.6	P-STATIC	13.837	13.838	13.842	13.852	13.865	13.883	13.894	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.615	-4.222	-5.774	-7.284	-8.067	
	K-BAR	1.010	1.010	1.010	1.010	1.010	1.010	1.010	
	V-BAR	325.746	325.613	324.732	322.956	320.270	316.674	314.473	
	VZ-BAR	325.746	325.613	324.732	322.956	320.270	316.674	314.473	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.001	0.000	0.000	
	MACH-BAR	0.294	0.294	0.293	0.292	0.289	0.286	0.284	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.654	14.657	14.668	14.686	14.687	14.685	14.684	14.677
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.449	13.451	13.460	13.472	13.486	13.502	13.511	
	BETABAR	8.327	10.079	11.626	12.102	11.963	9.726	5.814	
	EPSILON	-0.000	-0.879	-2.547	-4.135	-5.733	-7.260	-8.118	
	K-BAR	0.945	0.945	0.945	0.945	0.944	0.944	0.945	
	V-BAR	388.528	388.608	388.802	389.504	387.279	384.396	382.708	
	VZ-BAR	384.432	382.604	380.826	380.847	378.868	378.857	380.740	
	V-THET-BAR	56.267	68.007	78.349	81.661	80.274	64.935	38.768	
	MACH-BAR	0.352	0.352	0.352	0.353	0.351	0.348	0.347	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.8	-3.7	-3.5	-4.4	-5.9	-9.5	-14.1	
	OMEGABAR	0.047	0.044	0.032	0.010	0.009	0.011	0.013	
	TURNING	-8.3	-10.1	-11.6	-12.1	-12.0	-9.7	-5.8	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.654	14.657	14.668	14.686	14.687	14.685	14.684	14.677
WCOR= 3.049	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29186.0	P-STATIC	12.696	12.698	12.706	12.711	12.716	12.719	12.716	
	BETABAR	6.444	7.881	9.185	9.645	9.568	7.780	4.664	
	EPSILON	-1.170	-1.782	-3.477	-4.650	-5.994	-6.854	-6.637	
	K-BAR	0.945	0.945	0.945	0.945	0.945	0.945	0.945	
	V-BAR	500.960	500.255	500.509	501.909	501.354	500.748	501.022	
	VZ-BAR	497.795	495.524	494.091	494.815	494.380	496.126	499.309	
	V-THET-BAR	56.422	68.588	79.894	84.091	83.331	67.787	40.737	
	MACH-BAR	0.458	0.457	0.457	0.459	0.458	0.458	0.458	
	U-WHEEL	639.543	658.579	696.656	734.734	772.811	810.887	829.926	
	V-BAR-PR	766.853	770.479	790.271	817.426	848.412	893.506	933.907	
	BETABAR-PR	49.523	49.973	51.301	52.746	54.357	56.270	57.676	
	V-THET-B-P	-585.341	-589.992	-616.762	-650.643	-689.479	-743.100	-789.189	
	MACH-BAR-P	0.701	0.704	0.722	0.747	0.775	0.817	0.834	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.985	19.480	19.743	19.497	19.557	19.131	18.003	19.467
ROTOR	T-TOTAL	566.26	566.58	567.10	565.40	565.08	568.87	571.01	566.02
	P-STATIC	14.783	14.900	15.139	15.351	15.551	15.695	15.758	
PR = 1.3264	BETABAR	47.959	46.235	45.826	44.970	43.526	46.275	49.091	
TR = 1.0924	EPSILON	-2.883	-2.417	-3.143	-4.380	-5.739	-6.462	-6.418	
EFF-A = 0.9117	K-BAR	0.935	0.935	0.935	0.935	0.935	0.935	0.935	
EFF-P = 0.9132	V-BAR	685.037	708.355	705.511	669.746	656.035	612.952	563.960	
	VZ-BAR	458.747	489.981	493.386	473.827	477.243	423.697	364.829	
	V-THET-BAR	508.750	511.543	504.497	473.334	450.134	442.906	430.059	
	MACH-BAR	0.609	0.631	0.628	0.594	0.582	0.539	0.493	
	U-WHEEL	632.029	650.569	687.653	724.737	761.821	798.904	817.446	
	V-BAR-PR	475.022	509.328	526.400	536.436	570.009	553.482	534.135	
	BETABAR-PR	15.042	15.838	20.386	27.946	33.149	40.043	46.718	
	V-THET-B-P	-123.280	-139.026	-183.356	-251.403	-311.686	-355.998	-387.386	
	MACH-BAR-P	0.422	0.453	0.466	0.476	0.505	0.487	0.465	
	D-FACTOR	0.586	0.544	0.537	0.543	0.510	0.567	0.615	
	TURNING	34.5	34.1	30.9	24.8	21.2	16.2	11.0	
	INCID-M	-7.9	-6.2	-4.0	-2.8	-2.5	-2.4	-2.1	
	DEVIATION	26.9	19.6	11.8	10.3	8.0	8.8	12.9	
	OMEGABAR-P	0.167	0.085	0.050	0.059	0.039	0.157	0.256	
	LOSS PAR	0.056	0.029	0.018	0.021	0.014	0.053	0.079	
	PT-RATIO	1.296	1.329	1.346	1.328	1.332	1.304	1.267	1.3264
	EFF-AD	0.838	0.918	0.950	0.936	0.955	0.812	0.686	0.9117
	EFF-POLY	0.843	0.921	0.951	0.938	0.956	0.818	0.696	0.9132
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.985	19.472	19.745	19.501	19.557	19.143	18.003	19.467
	T-TOTAL	566.26	566.57	567.11	565.50	565.05	568.80	571.61	566.02
	P-STATIC	14.800	14.865	15.035	15.216	15.394	15.543	15.610	
	BETABAR	48.190	46.118	45.082	44.295	42.493	45.208	48.387	
	EPSILON	-0.113	-1.175	-2.765	-4.171	-5.238	-6.884	-7.979	
	K-BAR	0.935	0.935	0.935	0.935	0.935	0.935	0.935	
	V-BAR	683.518	710.770	714.383	681.856	669.919	628.364	579.364	
	VZ-BAR	455.675	492.696	504.421	488.452	493.975	442.725	384.750	
	V-THET-BAR	509.468	512.275	505.867	475.751	452.528	445.394	433.163	
	MACH-BAR	0.607	0.633	0.636	0.606	0.595	0.554	0.507	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.221	18.818	19.348	19.166	19.170	18.640	18.015	19.015
ROTOR PLUS STATOR	T-TOTAL	566.26	566.55	567.13	565.55	565.02	568.69	571.61	566.02
	P-STATIC	16.496	16.506	16.505	16.473	16.432	16.374	16.338	
PR = 1.2956	BETABAR	15.083	13.901	12.033	12.365	12.656	10.988	8.644	
TR = 1.0924	EPSILON	0.450	-0.025	-1.174	-2.382	-3.441	-4.723	-5.489	
EFF-A = 0.8311	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8372	V-BAR	436.536	499.847	549.962	536.333	540.765	498.399	434.808	
	VZ-BAR	421.498	485.219	537.879	523.893	527.627	489.264	429.870	
	V-THET-BAR	113.593	120.009	114.648	114.843	118.477	94.995	65.347	
IGV,ROTOR,STATOR	MACH-BAR	0.380	0.436	0.482	0.470	0.474	0.434	0.376	
	EFF-POLY	0.724	0.753	0.819	0.817	0.766	0.666	0.586	
PR = 1.2940	INCID-M	-7.5	-6.5	-5.7	-6.3	-9.0	-8.4	-8.4	
TR = 1.0924	DEVIATION	14.3	12.6	11.1	12.0	13.3	13.0	11.6	
EFF-A = 0.8294	OMEGA-BAR	0.183	0.142	0.084	0.078	0.093	0.140	0.196	
EFF-P = 0.8335	LOSS PAR	0.063	0.050	0.031	0.030	0.038	0.059	0.086	
	D-FACTOR	0.567	0.496	0.441	0.427	0.403	0.454	0.534	
	TURNING	33.1	32.2	33.0	31.9	29.8	34.2	39.7	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 25)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.985	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29145.0	P-STATIC	13.819	13.819	13.824	13.833	13.847	13.866	13.877	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.613	-4.203	-5.768	-7.270	-8.007	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	329.326	329.191	328.297	326.517	323.806	320.101	317.932	
	VZ-BAR	329.326	329.191	328.297	326.517	323.806	320.101	317.932	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.001	0.001	0.000	
	MACH-BAR	0.297	0.297	0.297	0.295	0.292	0.289	0.287	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.656	14.659	14.669	14.667	14.688	14.687	14.685	14.679
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.496	13.492	13.501	13.512	13.526	13.541	13.549	
	BETABAR	8.201	10.064	11.724	12.697	11.946	9.718	5.922	
	EPSILON	-0.000	-0.879	-2.535	-4.120	-5.702	-7.269	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	381.967	381.956	382.401	382.939	380.861	378.050	376.399	
	VZ-BAR	378.002	376.070	374.228	374.436	372.613	372.611	374.391	
	V-THET-BAR	54.478	66.741	77.659	80.252	78.831	63.816	38.834	
	MACH-BAR	0.346	0.346	0.346	0.347	0.345	0.342	0.341	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.9	-3.7	-3.4	-4.4	-5.9	-9.5	-14.0	
	OMEGABAR	0.044	0.041	0.029	0.009	0.008	0.009	0.011	
	TURNING	-0.2	-10.1	-11.7	-12.1	-11.9	-9.7	-5.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.656	14.659	14.670	14.687	14.688	14.687	14.685	14.679
WCOR= 2.988	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29145.0	P-STATIC	12.759	12.767	12.775	12.781	12.786	12.789	12.786	
	BETABAR	6.354	7.878	9.275	9.658	9.515	7.794	4.761	
	EPSILON	-1.176	-1.730	-3.217	-4.573	-5.827	-6.866	-6.667	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	491.872	491.179	491.336	492.514	491.950	491.457	491.696	
	VZ-BAR	488.656	486.536	484.913	485.534	485.097	486.907	490.000	
	V-THET-BAR	54.435	67.325	79.187	82.626	81.832	66.044	40.680	
	MACH-BAR	0.449	0.449	0.449	0.450	0.449	0.449	0.449	
	U-WHEEL	638.645	657.654	695.677	733.701	771.725	809.748	828.760	
	V-BAR-PR	781.758	784.990	784.352	812.187	843.374	888.422	927.885	
	BETABAR-PR	50.076	50.505	51.812	53.280	54.886	56.704	58.124	
	V-THET-B-P	-584.209	-590.330	-616.491	-651.674	-689.893	-743.104	-787.924	
	MACH-BAR-P	0.696	0.699	0.716	0.742	0.770	0.811	0.847	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.014	19.556	19.855	19.553	19.612	19.431	18.705	19.546
ROTOR	T-TOTAL	566.94	567.51	567.66	566.14	566.07	569.51	572.64	567.39
	P-STATIC	14.986	15.101	15.332	15.532	15.713	15.872	15.949	
PR = 1.3316	BETABAR	50.183	48.197	46.923	46.584	45.024	47.770	52.358	
TR = 1.0939	EPSILON	-2.885	-2.375	-3.240	-4.454	-5.519	-6.463	-6.418	
EFF-A = 0.9102	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9120	V-BAR	669.240	696.046	696.796	658.007	645.954	604.150	553.459	
	VZ-BAR	428.543	464.372	475.894	452.252	456.564	466.084	338.612	
	W-THET-BAR	514.035	519.288	508.968	477.972	456.951	447.283	438.252	
	MACH-BAR	0.593	0.619	0.619	0.583	0.572	0.531	0.483	
	U-WHEEL	631.142	649.655	686.687	723.719	760.750	797.781	816.297	
	V-BAR-PR	444.255	482.326	508.046	514.740	548.412	536.503	507.120	
	BETABAR-PR	15.284	15.679	20.476	28.516	33.639	40.805	48.200	
	V-THET-B-P	-117.106	-130.368	-177.718	-245.747	-303.799	-350.499	-378.040	
	MACH-BAR-P	0.394	0.429	0.491	0.456	0.485	0.471	0.442	
	D-FACTOR	0.627	0.581	0.559	0.560	0.536	0.586	0.644	
	TURNING	34.8	34.6	31.3	24.8	21.2	16.0	9.9	
	INCID-M	-7.5	-5.0	-3.5	-2.3	-2.0	-1.9	-1.7	
	DEVIATION	27.1	19.4	11.9	10.8	8.4	9.6	14.4	
	OMEGABAR-P	0.178	0.093	0.044	0.064	0.050	0.155	0.261	
	LOSS PAR	0.060	0.032	0.016	0.022	0.017	0.052	0.078	
	PT-RATIO	1.297	1.334	1.355	1.331	1.335	1.309	1.274	1.3316
	EFF-AD	0.831	0.913	0.957	0.932	0.944	0.918	0.889	0.9102
	EFF-POLY	0.836	0.916	0.959	0.934	0.945	0.924	0.899	0.9120
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.014	19.545	19.858	19.559	19.611	19.246	18.705	19.546
	T-TOTAL	566.94	567.50	567.66	566.18	566.03	569.41	572.64	567.39
	P-STATIC	14.957	15.043	15.211	15.394	15.592	15.763	15.835	
	BETABAR	50.012	47.815	46.234	45.747	44.374	46.984	51.323	
	EPSILON	-0.113	-1.063	-2.313	-3.685	-5.057	-6.462	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	671.851	701.753	707.070	670.645	656.772	615.820	565.420	
	VZ-BAR	431.746	471.260	489.089	467.989	469.457	420.123	353.345	
	V-THET-BAR	514.761	519.949	510.625	480.364	459.304	450.242	441.415	
	MACH-BAR	0.596	0.624	0.629	0.595	0.582	0.542	0.494	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.368	18.963	19.458	19.253	19.222	18.717	18.191	19.110
ROTOR PLUS STATOR	T-TOTAL	566.94	567.48	567.70	566.19	566.03	569.34	572.64	567.39
	P-STATIC	16.586	16.597	16.597	16.569	16.530	16.475	16.443	
PR = 1.3019	BETABAR	15.001	13.786	12.255	12.367	12.876	12.048	8.887	
TR = 1.0939	EPSILON	0.450	-0.085	-1.287	-2.526	-3.694	-4.774	-5.489	
EFF-A = 0.8341	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8462	V-BAR	442.176	504.401	550.371	534.446	535.630	494.762	442.463	
	VZ-BAR	427.106	489.862	537.828	522.044	522.163	483.865	437.154	
	V-THET-BAR	114.454	120.121	116.826	114.465	119.355	103.268	68.351	
IGV,ROTOR,STATOR	MACH-BAR	0.384	0.440	0.462	0.468	0.469	0.431	0.383	
	EFF-POLY	0.749	0.766	0.808	0.821	0.743	0.616	0.574	
PR = 1.3005	INCID-M	-5.6	-4.8	-4.6	-4.8	-7.1	-8.6	-3.5	
TR = 1.0939	DEVIATION	14.2	12.5	11.4	12.0	13.5	14.0	11.8	
EFF-A = 0.8326	OMEGA-BAR	0.159	0.129	0.086	0.073	0.097	0.152	0.179	
EFF-P = 0.8367	LOSS PAR	0.055	0.046	0.032	0.029	0.039	0.064	0.078	
	D-FACTOR	0.553	0.488	0.435	0.423	0.403	0.445	0.514	
	TURNING	35.0	34.0	34.0	33.4	31.5	34.9	42.4	

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Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 26)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.910	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29210.0	P-STATIC	13.848	13.849	13.853	13.862	13.876	13.894	13.905	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.611	-4.218	-5.766	-7.290	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	323.645	323.513	322.629	320.853	318.177	314.586	312.409	
	VZ-BAR	323.645	323.513	322.629	320.853	318.177	314.586	312.409	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.000	0.000	0.000	
	MACH-BAR	0.292	0.292	0.291	0.290	0.287	0.284	0.282	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.659	14.661	14.671	14.688	14.689	14.688	14.686	14.680
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.582	13.584	13.591	13.602	13.615	13.629	13.637	
	BETABAR	8.265	10.077	11.722	12.090	11.929	9.697	5.913	
	EPSILON	-0.000	-0.879	-2.542	-4.159	-5.710	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	366.520	366.599	366.934	367.701	365.735	363.030	361.464	
	VZ-BAR	362.767	360.935	359.281	359.545	357.836	357.830	359.541	
	V-THET-BAR	52.311	64.143	74.546	77.017	75.597	61.145	37.239	
	MACH-BAR	0.332	0.332	0.332	0.333	0.331	0.329	0.327	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.9	-3.7	-3.4	-4.4	-6.0	-9.5	-14.0	
	OMEGABAR	0.042	0.040	0.028	0.008	0.007	0.008	0.010	
	TURNING	-6.2	-10.1	-11.7	-12.1	-11.9	-9.7	-5.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.659	14.661	14.671	14.688	14.689	14.688	14.686	14.680
WCOR= 2.913	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29216.0	P-STATIC	12.916	12.923	12.940	12.936	12.943	12.946	12.943	
	BETABAR	6.378	7.916	9.310	9.690	9.602	7.808	4.775	
	EPSILON	-1.170	-1.783	-3.328	-4.799	-6.050	-6.861	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	470.491	469.805	470.046	471.205	470.449	469.692	470.058	
	VZ-BAR	467.576	465.322	463.855	464.483	463.858	465.525	468.427	
	V-THET-BAR	52.269	64.703	76.039	79.311	78.475	63.631	39.150	
	MACH-BAR	0.429	0.428	0.429	0.430	0.429	0.428	0.429	
	U-WHEEL	640.069	659.121	697.229	735.336	773.446	811.554	830.608	
	V-BAR-PR	751.091	754.890	775.271	803.817	835.557	880.603	919.707	
	BETABAR-PR	51.499	51.945	53.256	54.700	56.278	56.093	59.381	
	V-THET-B-P	-587.800	-594.418	-621.190	-656.027	-694.971	-747.723	-791.478	
	MACH-BAR-P	0.685	0.688	0.707	0.733	0.762	0.803	0.839	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.043	19.643	20.031	19.655	19.674	19.205	18.779	19.629
ROTOR	T-TOTAL	567.56	568.93	568.89	567.08	567.14	570.00	573.63	568.53
	P-STATIC	15.186	15.310	15.580	15.799	15.992	16.102	16.242	
PR = 1.3371	BETABAR	52.262	50.509	48.536	48.610	47.471	51.986	56.034	
TR = 1.0961	EPSILON	-2.885	-2.396	-3.347	-4.657	-5.772	-6.587	-6.418	
EFF-A = 0.9027	K-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
EFF-P = 0.9049	V-BAR	653.385	685.324	688.156	641.994	625.792	574.077	529.125	
	VZ-BAR	399.908	435.849	455.661	424.476	423.016	353.591	289.464	
	V-THET-BAR	516.707	528.856	515.084	481.639	461.165	452.208	442.927	
	MACH-BAR	0.578	0.607	0.618	0.587	0.572	0.502	0.460	
	U-WHEEL	632.549	651.104	686.218	725.333	762.447	799.561	818.118	
	W-BAR-PR	416.348	452.670	487.284	489.503	519.343	495.764	473.875	
	BETABAR-PR	16.155	15.666	20.736	29.859	35.460	44.498	52.350	
	V-THET-B-P	-115.843	-122.248	-172.534	-243.694	-301.282	-347.353	-375.191	
	MACH-BAR-P	0.368	0.401	0.432	0.433	0.458	0.434	0.412	
	D-FACTOR	0.661	0.620	0.585	0.590	0.571	0.632	0.688	
	TURNING	35.3	36.3	32.5	24.8	20.8	13.0	7.0	
	INCID-M	-5.9	-4.2	-2.0	-0.9	-0.6	-0.5	-0.4	
	DEVIATION	28.0	19.4	12.1	12.2	10.3	13.3	18.5	
	OMEGABAR-P	0.192	0.111	0.041	0.067	0.061	0.180	0.270	
	LOSS PAR	0.064	0.039	0.015	0.023	0.021	0.056	0.074	
	PT-RATIO	1.299	1.340	1.365	1.338	1.339	1.308	1.279	1.3371
	EFF-AD	0.825	0.901	0.962	0.931	0.933	0.796	0.688	0.9027
	EFF-POLY	0.831	0.904	0.963	0.933	0.935	0.862	0.698	0.9049
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.043	19.633	20.033	19.664	19.676	19.212	18.779	19.629
	T-TOTAL	567.56	568.91	568.92	567.12	567.11	570.60	573.63	568.53
	P-STATIC	15.201	15.290	15.499	15.689	15.873	16.023	16.095	
	BETABAR	52.521	50.496	48.110	47.898	46.712	50.669	54.937	
	EPSILON	-0.113	-1.337	-2.670	-3.993	-5.346	-6.854	-7.979	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	652.027	686.373	695.154	652.437	636.809	588.581	545.083	
	VZ-BAR	396.735	436.652	464.146	437.430	436.635	373.668	313.106	
	V-THET-BAR	517.436	529.546	517.497	484.074	463.547	455.215	446.124	
	MACH-BAR	0.577	0.608	0.617	0.577	0.562	0.516	0.474	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.514	19.131	19.606	19.340	19.244	18.773	18.309	19.205
ROTOR PLUS STATOR	T-TOTAL	567.56	568.88	568.95	567.15	567.08	570.50	573.63	568.53
	P-STATIC	17.058	17.067	17.063	17.034	16.998	16.949	16.922	
PR = 1.3082	BETABAR	15.274	14.113	12.479	12.496	13.016	12.299	10.514	
TR = 1.0961	EPSILON	0.450	-0.066	-1.244	-2.415	-3.512	-4.681	-5.489	
EFF-A = 0.8306	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
EFF-P = 0.8369	V-BAR	397.214	468.074	515.750	492.635	487.246	444.093	391.601	
	VZ-BAR	383.283	453.957	503.565	480.967	474.727	433.900	385.026	
	V-THET-BAR	164.642	114.065	111.446	106.585	109.742	94.598	71.460	
IGV,ROTOR,STATOR	MACH-BAR	0.344	0.407	0.450	0.430	0.425	0.385	0.337	
	EFF-POLY	0.802	0.809	0.814	0.829	0.796	0.713	0.663	
PR = 1.3070	INCID-M	-3.1	-2.2	-2.7	-2.6	-4.8	-3.0	0.2	
TR = 1.0961	DEVIATION	14.5	12.8	11.6	12.1	13.6	14.3	13.5	
EFF-A = 0.8295	OMEGA-BAR	0.138	0.116	0.094	0.081	0.113	0.138	0.175	
EFF-P = 0.8339	LOSS PAR	0.047	0.041	0.035	0.032	0.046	0.058	0.076	
	D-FACTOR	0.615	0.538	0.482	0.478	0.469	0.516	0.590	
	TURNING	37.2	36.4	35.6	35.4	33.7	38.4	44.4	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 27)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.837	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29105.0	P-STATIC	13.893	13.894	13.898	13.906	13.919	13.936	13.946	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.926	-2.584	-4.223	-5.761	-7.288	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	314.754	314.621	313.769	312.065	309.475	306.017	303.901	
	VZ-BAR	314.754	314.621	313.769	312.065	309.475	306.017	303.901	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.001	0.000	0.000	
	MACH-BAR	0.284	0.284	0.283	0.282	0.279	0.276	0.274	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.661	14.663	14.673	14.688	14.690	14.689	14.688	14.681
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.618	13.620	13.627	13.638	13.650	13.664	13.672	
	BETABAR	8.084	10.067	11.717	12.089	12.020	9.691	6.019	
	EPSILON	-0.003	-0.887	-2.511	-4.144	-5.702	-7.282	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	360.502	360.555	360.848	361.548	359.606	356.980	355.436	
	VZ-BAR	356.920	354.996	353.348	353.531	351.741	351.874	353.470	
	V-THET-BAR	50.693	63.020	73.280	75.717	74.891	60.091	37.271	
	MACH-BAR	0.326	0.326	0.327	0.327	0.325	0.323	0.322	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.0	-3.7	-3.4	-4.4	-5.9	-9.5	-13.5	
	OMEGABAR	0.042	0.039	0.027	0.008	0.006	0.007	0.009	
	TURNING	-8.1	-10.1	-11.7	-12.1	-12.0	-9.7	-6.0	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.661	14.663	14.673	14.689	14.690	14.689	14.688	14.681
WCOR= 2.840	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29105.0	P-STATIC	12.977	12.984	12.990	12.997	13.003	13.007	13.005	
	BETABAR	6.294	7.921	9.317	9.700	9.089	7.816	4.869	
	EPSILON	-1.170	-1.743	-3.362	-4.896	-6.127	-6.971	-6.657	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	462.032	461.366	461.687	462.747	461.928	461.278	461.456	
	VZ-BAR	459.247	456.957	455.595	456.132	455.340	456.982	459.791	
	V-THET-BAR	50.653	63.578	74.745	77.904	77.739	62.732	39.164	
	MACH-BAR	0.421	0.420	0.421	0.422	0.421	0.420	0.420	
	U-WHEEL	637.768	650.751	694.723	732.694	770.666	806.637	827.643	
	V-BAR-PR	745.394	748.777	769.380	797.957	829.150	874.767	912.750	
	BETABAR-PR	51.967	52.391	53.669	55.135	56.689	58.505	59.751	
	V-THET-B-P	-587.115	-593.174	-619.977	-654.730	-692.927	-745.965	-788.459	
	MACH-BAR-P	0.679	0.682	0.701	0.727	0.755	0.797	0.832	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.058	19.727	20.153	19.746	19.714	19.249	18.838	19.709
ROTOR	T-TOTAL	568.29	569.60	569.61	567.88	568.45	571.03	574.41	569.30
	P-STATIC	15.080	15.219	15.496	15.706	15.904	16.061	16.130	
PR = 1.3425	BETABAR	52.000	49.982	47.934	48.011	47.779	50.703	55.374	
TR = 1.0976	EPSILON	-2.488	-2.468	-3.308	-4.683	-5.979	-6.602	-6.418	
EFF-A = 0.9013	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.9039	V-BAR	664.600	699.142	703.551	657.217	637.484	588.022	547.070	
	VZ-BAR	409.165	449.586	471.369	439.675	428.385	372.457	340.856	
	V-THET-BAR	523.715	535.399	522.696	488.483	472.093	454.670	450.172	
	MACH-BAR	0.588	0.620	0.624	0.581	0.566	0.515	0.476	
	U-WHEEL	630.275	648.764	685.744	722.725	759.707	796.687	815.177	
	V-BAR-PR	422.813	463.666	498.952	458.210	515.992	505.574	479.437	
	BETABAR-PR	14.598	14.150	19.122	28.047	33.877	42.544	49.581	
	V-THET-B-P	-106.561	-113.360	-168.448	-234.237	-287.613	-341.717	-365.005	
	MACH-BAR-P	0.374	0.411	0.443	0.441	0.455	0.443	0.417	
	D-FACTOR	0.653	0.606	0.571	0.581	0.578	0.621	0.675	
	TURNING	37.4	38.2	34.6	27.1	22.8	16.0	10.2	
	INCID-M	-5.4	-3.7	-1.6	-0.4	-0.2	-0.1	-0.0	
	DEVIATION	26.5	17.9	10.5	10.4	8.7	11.3	15.7	
	OMEGABAR-P	0.208	0.115	0.036	0.069	0.080	0.182	0.278	
	LOSS PAR	0.070	0.039	0.013	0.024	0.028	0.059	0.081	
	PI-RATIO	1.360	1.365	1.373	1.344	1.342	1.310	1.283	1.3425
	EFF-AD	0.815	0.902	0.967	0.931	0.915	0.797	0.687	0.9013
	EFF-POLY	0.821	0.905	0.968	0.953	0.918	0.804	0.697	0.9039
STATOR LEADING EDGE	DIAMETER	4.956	5.094	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.058	19.715	20.156	19.756	19.718	19.259	18.838	19.709
	T-TOTAL	568.29	569.56	569.65	567.91	568.43	570.96	574.41	569.30
	P-STATIC	15.096	15.191	15.496	15.661	15.776	15.933	16.007	
	BETABAR	52.258	49.916	47.490	47.375	46.988	49.613	54.045	
	EPSILON	-0.113	-1.115	-2.671	-4.260	-5.329	-6.812	-7.979	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	663.219	700.704	711.006	667.152	649.132	601.308	560.144	
	VZ-BAR	405.965	451.200	480.434	451.794	442.807	389.645	358.892	
	V-THET-BAR	524.454	536.071	524.126	490.892	474.651	457.948	453.421	
	MACH-BAR	0.587	0.622	0.631	0.591	0.573	0.527	0.488	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.528	19.402	19.672	19.424	19.304	18.797	18.410	19.268
ROTOR PLUS STATOR	T-TOTAL	568.29	569.55	569.67	567.94	568.39	570.82	574.41	569.30
	P-STATIC	16.927	16.937	16.934	16.903	16.862	16.809	16.781	
PR = 1.3124	BETABAR	15.249	14.182	12.551	12.461	12.904	11.941	10.466	
TR = 1.0976	EPSILON	0.430	-0.114	-1.247	-2.368	-3.495	-4.685	-5.489	
EFF-A = 0.8280	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8345	V-BAR	417.125	490.679	535.570	515.446	508.789	464.298	424.574	
	VZ-BAR	402.439	475.737	522.771	503.304	495.940	454.249	417.511	
	V-THET-BAR	109.711	120.146	116.378	111.215	113.623	96.070	77.124	
IGV,ROTOR,STATOR	MACH-BAR	0.362	0.427	0.466	0.450	0.444	0.403	0.366	
	EFF-POLY	0.801	0.805	0.793	0.822	0.758	0.695	0.672	
PR = 1.3115	INCID-M	-3.4	-2.7	-3.3	-3.1	-4.5	-4.0	-0.7	
TR = 1.0976	DEVIATION	14.5	12.9	11.7	12.1	13.5	13.9	13.4	
EFF-A = 0.8267	OMEGA-BAR	0.134	0.113	0.102	0.080	0.105	0.139	0.151	
EFF-P = 0.8317	LOSS PAR	0.046	0.040	0.038	0.031	0.043	0.059	0.066	
	D-FACTOR	0.593	0.515	0.467	0.457	0.451	0.494	0.544	
	TURNING	37.0	35.7	34.9	34.9	34.1	37.7	43.6	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 28)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.730	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29077.0	P-STATIC	13.986	13.986	13.990	13.998	14.009	14.024	14.033	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.584	-4.222	-5.757	-7.288	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	295.596	295.479	294.683	293.094	290.697	287.458	285.477	
	VZ-BAR	295.596	295.479	294.685	293.094	290.697	287.458	285.477	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.267	0.266	0.266	0.264	0.262	0.259	0.257	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.664	14.666	14.675	14.689	14.691	14.690	14.689	14.683
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.752	13.754	13.760	13.776	13.781	13.793	13.800	
	BETABAR	7.953	10.045	11.698	12.063	11.992	9.767	5.991	
	EPSILON	-0.000	-0.879	-2.511	-4.135	-5.683	-7.282	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	336.446	336.472	336.849	337.611	335.834	333.425	331.957	
	VZ-BAR	333.210	331.306	329.853	330.156	328.505	328.581	330.144	
	V-THET-BAR	46.553	58.684	68.296	70.559	69.776	56.561	34.647	
	MACH-BAR	0.304	0.304	0.304	0.305	0.303	0.301	0.300	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.1	-3.7	-3.4	-4.4	-5.9	-9.5	-13.9	
	OMEGABAR	0.043	0.041	0.028	0.007	0.005	0.006	0.008	
	TURNING	-8.0	-10.0	-11.7	-12.1	-12.0	-9.8	-6.0	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.664	14.666	14.675	14.689	14.691	14.690	14.689	14.683
WCOR= 2.730	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29077.0	P-STATIC	13.202	13.208	13.214	13.219	13.227	13.231	13.229	
	BETABAR	6.261	7.942	9.346	9.765	9.718	7.524	4.874	
	EPSILON	-1.170	-1.699	-3.377	-5.205	-6.757	-7.361	-8.037	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	429.246	428.540	428.923	430.086	429.111	428.339	428.522	
	VZ-BAR	426.718	424.423	423.229	423.905	422.954	424.236	426.974	
	V-THET-BAR	46.515	59.211	69.657	72.652	72.436	59.050	36.407	
	MACH-BAR	0.390	0.390	0.390	0.391	0.390	0.389	0.389	
	U-WHEEL	637.155	656.120	694.054	731.989	769.924	807.859	826.826	
	V-BAR-PR	728.656	732.419	754.321	783.854	815.712	860.639	898.570	
	BETABAR-PR	54.153	54.566	55.809	57.261	58.767	60.465	61.623	
	V-THET-B-P	-590.639	-596.909	-624.397	-659.337	-697.489	-746.809	-790.420	
	MACH-BAR-P	0.662	0.666	0.686	0.713	0.741	0.782	0.817	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.102	19.846	20.354	19.938	19.762	19.254	18.867	19.840
ROTOR	T-TOTAL	569.17	570.49	570.81	568.48	569.20	572.70	575.19	570.26
	P-STATIC	15.308	15.434	15.714	15.948	16.137	16.304	16.388	
PR = 1.3512	BETABAR	54.701	51.539	49.070	48.797	49.701	55.090	60.293	
TR = 1.0994	EPSILON	-2.885	-2.479	-3.208	-4.875	-6.193	-6.703	-6.418	
EFF-A = 0.9052	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9076	V-BAR	647.438	689.199	699.056	649.706	620.177	564.885	542.141	
	VZ-BAR	374.116	428.709	457.969	427.979	401.127	323.378	258.758	
	V-THET-BAR	528.406	539.592	528.149	488.827	472.968	463.642	453.515	
	MACH-BAR	0.571	0.610	0.619	0.574	0.546	0.493	0.453	
	U-WHEEL	629.669	648.140	685.085	722.030	758.975	795.921	814.393	
	V-BAR-PR	387.579	442.238	484.153	487.413	492.709	484.351	444.059	
	BETABAR-PR	15.146	14.208	18.913	28.585	35.493	45.849	54.359	
	V-THET-B-P	-101.263	-108.547	-156.936	-233.203	-286.007	-332.878	-360.877	
	MACH-BAR-P	0.342	0.391	0.429	0.430	0.434	0.405	0.385	
	D-FACTOR	0.698	0.681	0.588	0.591	0.604	0.670	0.712	
	TURNING	39.0	40.4	37.0	26.7	23.3	14.6	7.3	
	INCID-M	-3.2	-1.5	0.6	1.7	1.9	1.8	1.8	
	DEVIATION	27.0	17.9	10.3	10.9	10.3	14.6	20.5	
	OMEGABAR-P	0.229	0.116	0.069	0.051	0.089	0.213	0.294	
	LOSS PAR	0.077	0.041	0.010	0.018	0.030	0.065	0.077	
	PT-RATIO	1.303	1.353	1.367	1.357	1.345	1.311	1.284	1.3512
	EFF-AD	0.807	0.904	0.976	0.951	0.909	0.775	0.681	0.9052
	EFF-POLY	0.814	0.908	0.976	0.952	0.912	0.780	0.692	0.9076
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.102	19.832	20.355	19.945	19.773	19.268	18.867	19.840
	T-TOTAL	569.17	570.47	570.85	568.51	569.12	572.61	575.19	570.26
	P-STATIC	15.302	15.394	15.619	15.844	16.037	16.216	16.304	
	BETABAR	54.749	51.373	48.567	48.150	48.945	54.195	59.279	
	EPSILON	-0.113	-1.158	-2.970	-4.178	-5.306	-6.664	-7.579	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	647.970	691.663	706.958	659.331	630.131	574.893	531.359	
	VZ-BAR	373.982	431.815	467.819	439.895	413.874	336.412	271.453	
	V-THET-BAR	529.153	540.254	530.028	491.131	475.141	466.086	456.789	
	MACH-BAR	0.572	0.612	0.627	0.583	0.555	0.502	0.461	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.590	19.337	19.738	19.483	19.346	18.832	18.485	19.335
ROTOR PLUS STATOR	T-TOTAL	569.17	570.49	570.86	568.61	568.95	572.37	575.19	570.26
	P-STATIC	17.210	17.220	17.211	17.180	17.143	17.098	17.074	
PR = 1.3168	BETABAR	14.980	12.819	12.304	12.222	12.165	11.560	10.255	
TR = 1.0994	EPSILON	0.450	-0.266	-1.309	-2.200	-3.092	-4.457	-5.489	
EFF-A = 0.8231	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8298	V-BAR	586.163	472.264	513.014	491.027	481.729	432.667	393.682	
	VZ-BAR	373.040	460.506	501.230	479.899	470.912	423.837	387.394	
	V-THET-BAR	99.816	104.684	109.325	103.948	101.511	86.713	70.083	
IGV,ROTOR,STATOR	MACH-BAR	0.334	0.410	0.447	0.428	0.419	0.374	0.339	
	EFF-POLY	0.811	0.814	0.757	0.770	0.761	0.711	0.692	
PR = 1.3158	INCID-M	-0.9	-1.3	-2.3	-2.4	-2.6	0.6	4.5	
TR = 1.0994	DEVIATION	14.2	11.5	11.4	11.9	12.8	13.5	13.2	
EFF-A = 0.8423	OMEGA-BAR	0.135	0.112	0.130	0.113	0.114	0.143	0.149	
EFF-P = 0.8275	LOSS PAR	0.046	0.040	0.049	0.044	0.046	0.060	0.065	
	D-FACTOR	0.639	0.547	0.503	0.494	0.487	0.540	0.586	
	TURNING	39.8	38.6	36.3	35.9	36.8	42.6	49.0	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 29)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
NCOR= 2.625	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29146.0	P-STATIC	14.042	14.042	14.046	14.053	14.063	14.077	14.085	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.596	-4.197	-5.773	-7.288	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	283.497	283.383	282.625	281.115	278.808	275.695	273.798	
	VZ-BAR	283.497	283.383	282.625	281.115	278.808	275.695	273.798	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.256	0.255	0.255	0.253	0.251	0.248	0.247	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.666	14.668	14.676	14.690	14.691	14.691	14.690	14.684
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.805	13.806	13.813	13.822	13.832	13.844	13.850	
	BETABAR	7.835	10.029	11.703	12.053	11.970	9.742	6.084	
	EPSILON	-0.000	-0.879	-2.530	-4.128	-5.702	-7.282	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	326.905	326.880	327.197	327.888	326.124	323.823	322.443	
	VZ-BAR	323.854	321.876	320.395	320.661	319.032	319.142	320.627	
	V-THET-BAR	44.564	56.920	66.366	68.465	67.640	58.797	34.174	
	MACH-BAR	0.295	0.295	0.296	0.296	0.295	0.292	0.291	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.2	-3.7	-3.4	-4.5	-5.9	-9.5	-13.8	
	OMEGABAR	0.043	0.041	0.028	0.007	0.005	0.005	0.007	
	TURNING	-7.8	-10.0	-11.7	-12.1	-12.0	-9.7	-6.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.666	14.668	14.676	14.690	14.691	14.691	14.690	14.684
NCOR= 2.627	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29146.0	P-STATIC	13.286	13.293	13.297	13.303	13.313	13.319	13.317	
	BETABAR	6.141	7.944	9.359	9.732	9.720	7.928	4.963	
	EPSILON	-1.170	-1.618	-3.504	-5.524	-7.215	-7.763	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	416.266	415.636	416.217	417.171	415.888	414.829	415.076	
	VZ-BAR	413.877	411.640	410.676	411.168	409.918	410.856	413.520	
	V-THET-BAR	44.529	57.439	67.686	70.515	70.215	57.212	35.910	
	MACH-BAR	0.378	0.377	0.378	0.379	0.378	0.377	0.377	
	U-WHEEL	638.667	657.677	695.702	733.727	771.752	809.776	828.789	
	V-BAR-PR	724.082	727.830	750.376	780.329	812.523	857.417	894.234	
	BETABAR-PR	55.139	55.558	56.817	58.202	59.701	61.367	62.456	
	V-THET-B-P	-594.137	-600.238	-628.016	-663.211	-701.537	-752.564	-792.879	
	MACH-BAR-P	0.658	0.661	0.681	0.709	0.738	0.779	0.812	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.681	19.932	20.536	20.202	19.788	19.235	18.750	19.962
ROTOR	T-TOTAL	570.05	571.21	571.37	568.50	569.91	573.35	575.76	570.72
-----	P-STATIC	15.453	15.589	15.887	16.125	16.307	16.482	16.566	
PR = 1.3595	BETABAR	62.597	52.825	49.536	48.136	51.569	58.441	68.495	
TR = 1.1003	EPSILON	-2.885	-2.199	-3.453	-5.166	-6.604	-6.919	-6.418	
EFF-A = 0.9161	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9180	V-BAR	601.044	681.925	696.701	652.680	606.726	585.095	490.368	
	VZ-BAR	276.627	412.183	452.132	435.587	377.148	285.494	179.758	
	V-THET-BAR	533.601	543.055	530.063	486.057	475.228	464.051	456.232	
	MACH-BAR	0.528	0.603	0.617	0.577	0.533	0.475	0.424	
	U-WHEEL	631.163	649.677	686.711	723.744	760.776	797.809	816.325	
	V-BAR-PR	293.327	425.755	478.530	496.274	473.127	439.712	402.468	
	BETABAR-PR	19.427	14.515	19.108	28.622	37.138	49.505	63.472	
	V-THET-B-P	-97.562	-106.623	-156.648	-237.687	-285.548	-333.758	-360.094	
	MACH-BAR-P	0.257	0.376	0.424	0.438	0.416	0.383	0.348	
	D-FACTOR	0.830	0.654	0.595	0.578	0.629	0.700	0.759	
	TURNING	35.7	41.0	37.7	29.6	22.6	11.9	-1.0	
	INCID-M	-2.3	-0.6	1.5	2.7	2.8	2.7	2.7	
	DEVIATION	31.3	18.3	10.5	11.0	11.9	18.3	29.6	
	OMEGABAR-P	0.334	0.119	0.009	0.008	0.099	0.227	0.321	
	LOSS PAR	0.110	0.041	0.003	0.003	0.033	0.065	0.064	
	PT-RATIO	1.274	1.359	1.399	1.375	1.347	1.309	1.276	1.3595
	EFF-AD	0.723	0.905	0.992	0.993	0.900	0.761	0.657	0.9161
	EFF-POLY	0.732	0.909	0.992	0.993	0.904	0.769	0.668	0.9180
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.681	19.911	20.537	20.215	19.801	19.251	18.750	19.962
	T-TOTAL	570.05	571.19	571.40	568.52	569.83	573.26	575.76	570.72
	P-STATIC	15.449	15.565	15.819	16.037	16.213	16.376	16.462	
	BETABAR	62.670	52.852	49.238	47.602	50.758	56.974	66.145	
	EPSILON	-0.113	-1.560	-2.969	-4.231	-5.499	-6.715	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	601.497	682.588	702.365	661.143	616.463	557.519	502.448	
	VZ-BAR	276.156	412.343	458.584	445.798	389.996	304.031	203.202	
	V-THET-BAR	534.355	543.740	531.990	488.234	477.385	467.076	459.525	
	MACH-BAR	0.528	0.603	0.622	0.585	0.542	0.486	0.435	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.056	19.320	19.755	19.539	19.300	18.835	18.056	19.328
ROTOR PLUS STATOR	T-TOTAL	570.05	571.22	571.44	568.64	569.50	572.85	575.76	570.72
----------	P-STATIC	17.396	17.408	17.400	17.372	17.338	17.296	17.274	
PR = 1.3163	BETABAR	14.877	13.469	12.471	12.208	11.875	11.101	9.625	
TR = 1.1003	EPSILON	0.450	-0.374	-1.196	-1.936	-2.725	-4.178	-5.489	
EFF-A = 0.8145	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8216	V-BAR	269.153	447.748	494.569	475.027	454.304	406.607	294.834	
	VZ-BAR	260.131	435.454	482.898	464.285	444.581	398.988	290.683	
	V-THET-BAR	69.105	104.192	106.808	100.452	93.486	78.333	49.297	
IGV,ROTOR,STATOR	MACH-BAR	0.231	0.388	0.430	0.413	0.394	0.351	0.252	
----------	EFF-POLY	0.776	0.786	0.708	0.695	0.738	0.737	0.560	
PR = 1.3154	INCID-M	7.0	0.2	-1.6	-2.9	-0.8	3.3	11.4	
TR = 1.1003	DEVIATION	14.1	12.2	11.6	11.8	12.5	13.1	12.6	
EFF-A = 0.8140	OMEGA-BAR	0.193	0.136	0.166	0.162	0.140	0.145	0.304	
EFF-P = 0.8194	LOSS PAR	0.066	0.048	0.062	0.063	0.057	0.061	0.132	
	D-FACTOR	0.827	0.580	0.528	0.521	0.528	0.583	0.779	
	TURNING	47.8	39.4	36.8	35.4	38.9	45.9	56.5	

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Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 30)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.661	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24196.0	P-STATIC	14.023	14.023	14.027	14.034	14.045	14.060	14.068	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.926	-2.609	-4.235	-5.788	-7.291	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	287.695	287.564	286.787	285.143	282.734	279.533	277.593	
	VZ-BAR	287.695	287.564	286.787	285.143	282.734	279.533	277.593	
	V-THET-BAR	0.000	0.001	0.000	0.001	0.001	0.000	0.000	
	MACH-BAR	0.259	0.259	0.258	0.257	0.255	0.252	0.250	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.666	14.667	14.676	14.690	14.691	14.691	14.690	14.684
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.780	13.782	13.788	13.796	13.807	13.818	13.823	
	BETABAR	7.816	10.012	11.671	12.031	11.983	9.768	6.110	
	EPSILON	-0.000	-0.903	-2.560	-4.152	-5.745	-7.287	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	331.537	331.477	331.834	332.709	331.023	328.844	327.532	
	VZ-BAR	328.458	326.419	324.974	325.401	323.810	324.066	325.672	
	V-THET-BAR	45.085	57.628	67.128	69.351	68.725	55.789	34.862	
	MACH-BAR	0.300	0.299	0.300	0.301	0.299	0.297	0.296	
	INCID-B	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.3	-3.8	-3.5	-4.5	-5.9	-9.5	-13.8	
	OMEGABAR	0.043	0.041	0.028	0.007	0.005	0.006	0.008	
	TURNING	-7.8	-10.0	-11.7	-12.0	-12.0	-9.8	-6.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.666	14.667	14.676	14.690	14.691	14.691	14.690	14.684
WCOR= 2.663	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24196.0	P-STATIC	13.247	13.253	13.261	13.266	13.269	13.271	13.268	
	BETABAR	6.121	7.926	9.342	9.721	9.718	7.927	4.973	
	EPSILON	-1.170	-1.854	-3.227	-4.473	-5.696	-6.642	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	422.462	421.728	421.811	422.985	422.649	422.407	422.589	
	VZ-BAR	420.053	417.692	416.216	416.912	416.584	418.362	420.998	
	V-THET-BAR	45.049	58.151	68.469	71.421	71.345	58.255	36.633	
	MACH-BAR	0.384	0.383	0.383	0.384	0.384	0.384	0.384	
	U-WHEEL	530.199	545.980	577.547	609.114	640.681	672.248	688.031	
	V-BAR-PR	641.728	642.219	657.573	680.392	705.472	742.982	775.602	
	BETABAR-PR	49.113	49.429	50.730	52.210	53.806	55.729	57.126	
	V-THET-B-P	-485.150	-487.829	-509.078	-537.693	-569.336	-613.993	-651.398	
	MACH-BAR-P	0.583	0.583	0.597	0.618	0.641	0.675	0.705	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.706	17.842	17.963	17.868	17.852	17.490	17.192	17.794
ROTOR	T-TOTAL	550.34	549.71	550.99	549.73	548.87	551.07	552.93	550.11
	P-STATIC	14.547	14.600	14.742	14.882	15.008	15.118	15.172	
PR = 1.2118	BETABAR	42.784	41.837	42.823	41.328	39.507	42.485	44.841	
TR = 1.0606	EPSILON	-2.886	-2.633	-3.347	-4.377	-5.577	-6.390	-6.818	
EFF-A = 0.9342	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.9336	V-BAR	600.841	606.408	602.879	579.786	564.719	519.606	482.779	
	VZ-BAR	440.970	451.805	442.190	435.372	435.708	383.190	342.320	
	V-THET-BAR	408.112	408.478	409.793	382.877	359.257	350.932	340.429	
	MACH-BAR	0.537	0.543	0.539	0.518	0.504	0.461	0.426	
	U-WHEEL	523.970	539.340	570.083	600.826	631.570	662.313	677.685	
	V-BAR-PR	455.936	471.511	470.372	486.922	513.823	493.766	480.546	
	BETABAR-PR	14.721	16.619	19.925	26.588	32.004	39.098	44.573	
	V-THET-B-P	-115.857	-134.862	-160.290	-217.950	-272.312	-311.381	-337.256	
	MACH-BAR-P	0.408	0.422	0.420	0.435	0.459	0.438	0.424	
	D-FACTOR	0.486	0.458	0.481	0.466	0.443	0.509	0.554	
	TURNING	34.4	32.8	30.8	25.6	21.8	16.6	12.6	
	INCID-B	-8.3	-6.7	-4.5	-3.3	-3.1	-2.9	-2.7	
	DEVIATION	26.6	20.4	11.3	8.9	6.8	7.9	10.7	
	OMEGABAR-P	0.090	0.035	0.042	0.032	0.012	0.137	0.225	
	LOSS PAR	0.030	0.012	0.015	0.012	0.004	0.047	0.072	
	PT-RATIO	1.207	1.216	1.224	1.216	1.215	1.191	1.170	1.2118
	EFF-AD	0.908	0.964	0.956	0.963	0.985	0.820	0.697	0.9342
	EFF-POLY	0.909	0.964	0.956	0.963	0.985	0.823	0.703	0.9336
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.706	17.840	17.964	17.869	17.854	17.495	17.192	17.794
	T-TOTAL	550.34	549.72	550.97	549.77	548.87	551.04	552.93	550.11
	P-STATIC	14.572	14.585	14.667	14.777	14.883	14.995	15.050	
	BETABAR	43.088	41.806	42.310	40.660	38.680	43.412	43.538	
	EPSILON	-0.113	-1.023	-2.837	-4.135	-5.205	-7.043	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	598.271	607.687	610.394	590.773	578.061	534.119	497.779	
	VZ-BAR	436.922	452.976	451.398	448.144	451.263	400.578	360.850	
	V-THET-BAR	408.689	405.085	410.877	384.928	361.270	353.298	342.886	
	MACH-BAR	0.535	0.544	0.546	0.528	0.516	0.474	0.440	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.016	17.364	17.669	17.628	17.681	17.124	16.399	17.479
ROTOR PLUS STATOR	T-TOTAL	550.34	549.72	550.96	549.78	548.87	551.07	552.93	550.11
	P-STATIC	15.467	15.469	15.460	15.436	15.401	15.356	15.332	
PR = 1.1904	BETABAR	13.062	12.460	11.618	11.766	11.995	11.216	8.773	
TR = 1.0606	EPSILON	0.450	-0.030	-1.269	-2.522	-3.702	-4.925	-5.489	
EFF-A = 0.8431	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8469	V-BAR	421.714	463.014	497.786	495.885	505.053	450.399	355.631	
	VZ-BAR	410.802	452.111	487.588	485.467	494.026	441.792	351.470	
	V-THET-BAR	95.313	99.880	100.241	101.114	104.965	87.621	54.240	
IGV,ROTOR,STATOR	MACH-BAR	0.372	0.409	0.441	0.440	0.448	0.397	0.311	
	EFF-POLY	0.599	0.684	0.760	0.760	0.777	0.522	0.282	
PR = 1.1895	INCID-B	-12.6	-10.8	-8.5	-9.9	-12.8	-12.2	-11.2	
TR = 1.0606	DEVIATION	12.3	11.2	10.7	11.4	12.6	13.2	11.7	
EFF-A = 0.8423	OMEGA-BAR	0.220	0.146	0.089	0.078	0.058	0.149	0.370	
EFF-P = 0.8433	LOSS PAR	0.076	0.052	0.033	0.030	0.024	0.063	0.162	
	D-FACTOR	0.481	0.420	0.380	0.354	0.313	0.375	0.546	
	TURNING	30.0	29.3	30.7	28.9	26.7	30.2	34.8	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 31)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.552	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24163.0	P-STATIC	14.066	14.067	14.070	14.077	14.087	14.100	14.108	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.598	-4.218	-5.770	-7.288	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	278.054	277.932	277.175	275.663	273.377	270.322	268.459	
	VZ-BAR	278.054	277.932	277.175	275.663	273.377	270.322	268.459	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.251	0.250	0.250	0.248	0.246	0.243	0.242	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.668	14.670	14.677	14.690	14.691	14.691	14.690	14.685
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.820	13.821	13.827	13.836	13.845	13.856	13.862	
	BETABAR	7.700	10.007	11.657	12.030	12.077	9.757	6.104	
	EPSILON	-0.000	-0.930	-2.542	-4.159	-5.729	-7.282	-8.118	
	K-BAR	0.930	0.930	0.930	0.930	0.929	0.929	0.930	
	V-BAR	324.248	324.245	324.542	325.216	323.593	321.430	320.124	
	VZ-BAR	321.324	319.302	317.837	318.078	316.431	316.769	318.310	
	V-THET-BAR	43.444	56.339	65.627	67.782	67.703	54.473	34.038	
	MACH-BAR	0.293	0.293	0.293	0.294	0.292	0.290	0.289	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.4	-3.8	-3.5	-4.5	-5.8	-9.5	-13.8	
	OMEGABAR	0.042	0.040	0.028	0.007	0.005	0.005	0.007	
	TURNING	-7.7	-10.0	-11.7	-12.0	-12.1	-9.8	-6.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.668	14.670	14.677	14.690	14.691	14.691	14.690	14.685
WCOR= 2.553	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24163.0	P-STATIC	13.313	13.319	13.326	13.330	13.334	13.337	13.334	
	BETABAR	6.040	7.936	9.352	9.733	9.808	7.930	4.976	
	EPSILON	-1.170	-1.867	-3.286	-4.578	-5.881	-6.827	-6.637	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	412.522	411.834	411.878	412.993	412.586	412.206	412.387	
	VZ-BAR	410.232	407.882	406.403	407.049	406.556	408.255	410.893	
	V-THET-BAR	43.409	56.857	66.928	69.820	70.283	56.871	35.767	
	MACH-BAR	0.375	0.374	0.374	0.375	0.375	0.374	0.374	
	U-WHEEL	529.476	545.236	576.760	608.283	639.807	671.331	687.093	
	V-BAR-PR	636.043	636.303	651.994	675.008	699.751	737.728	770.071	
	BETABAR-PR	49.836	50.132	51.440	52.912	54.478	56.398	57.758	
	V-THET-B-P	-486.066	-488.378	-509.831	-538.463	-569.524	-614.461	-651.326	
	MACH-BAR-P	0.577	0.578	0.592	0.613	0.635	0.670	0.699	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.750	17.922	18.050	17.962	17.946	17.596	17.332	17.889
ROTOR	T-TOTAL	552.10	551.66	552.75	551.60	550.87	553.82	556.57	552.17
PR = 1.2182	P-STATIC	14.659	14.729	14.883	15.037	15.173	15.270	15.318	
TR = 1.0645	BETABAR	45.983	45.042	45.737	44.369	42.716	46.732	50.638	
EFF-A = 0.9019	EPSILON	-2.886	-2.660	-3.383	-4.425	-5.668	-6.471	-6.418	
EFF-P = 0.9017	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	593.984	601.098	596.742	572.802	556.682	513.915	481.504	
	VZ-BAR	412.745	424.729	416.500	409.458	409.007	352.264	305.377	
	V-THET-BAR	427.151	425.351	427.352	400.550	377.635	374.159	372.279	
	MACH-BAR	0.530	0.537	0.532	0.510	0.495	0.455	0.424	
	U-WHEEL	523.255	538.604	569.305	600.007	630.709	661.410	676.761	
	V-BAR-PR	423.786	439.576	440.056	455.495	480.981	454.584	431.236	
	BETABAR-PR	13.107	14.929	18.820	25.967	31.747	39.202	44.916	
	V-THET-B-P	-96.104	-113.253	-141.954	-199.457	-253.074	-287.251	-304.482	
	MACH-BAR-P	0.378	0.393	0.392	0.406	0.428	0.402	0.379	
	D-FACTOR	0.543	0.516	0.534	0.520	0.497	0.574	0.638	
	TURNING	36.7	35.2	32.6	26.9	22.7	17.2	12.8	
	INCID-R	-7.6	-6.0	-3.8	-2.6	-2.4	-2.2	-2.0	
	DEVIATION	25.0	18.7	10.2	8.3	6.6	8.0	11.1	
	OMEGABAR-P	0.134	0.074	0.073	0.062	0.043	0.180	0.278	
	LOSS PAR	0.046	0.026	0.026	0.022	0.015	0.061	0.088	
	PT-RATIO	1.210	1.222	1.230	1.223	1.221	1.198	1.180	1.2182
	EFF-AD	0.871	0.928	0.928	0.933	0.949	0.782	0.663	0.9019
	EFF-POLY	0.873	0.929	0.929	0.934	0.950	0.787	0.670	0.9017
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.750	17.919	18.050	17.963	17.948	17.602	17.332	17.889
	T-TOTAL	552.10	551.66	552.74	551.64	550.87	553.75	556.57	552.17
	P-STATIC	14.687	14.721	14.822	14.943	15.060	15.160	15.212	
	BETABAR	46.359	45.074	45.300	43.711	41.885	45.585	49.299	
	EPSILON	-0.113	-0.942	-2.539	-3.957	-5.323	-6.945	-7.979	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	591.085	601.659	602.910	582.710	568.750	527.143	494.599	
	VZ-BAR	407.931	424.891	424.086	421.189	423.427	368.930	322.535	
	V-THET-BAR	427.755	425.980	428.546	402.670	379.718	376.508	374.966	
	MACH-BAR	0.527	0.537	0.538	0.520	0.507	0.467	0.436	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.218	17.472	17.811	17.803	17.834	17.290	16.700	17.635
ROTOR PLUS STATOR	T-TOTAL	552.10	551.66	552.72	551.68	550.86	553.73	556.57	552.17
	P-STATIC	15.763	15.767	15.765	15.743	15.712	15.664	15.637	
PR = 1.2009	BETABAR	13.321	12.755	11.923	12.210	12.322	10.844	8.107	
TR = 1.0645	EPSILON	0.450	0.004	-1.109	-2.387	-3.584	-4.840	-5.489	
EFF-A = 0.8322	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8365	V-BAR	406.516	437.641	477.056	478.336	485.046	430.099	352.805	
	VZ-BAR	395.578	426.844	466.764	467.516	473.873	422.410	349.279	
	V-THET-BAR	93.666	96.605	98.560	101.163	103.510	80.945	49.750	
IGV,ROTOR,STATOR	MACH-BAR	0.357	0.386	0.421	0.423	0.429	0.378	0.308	
	EFF-POLY	0.698	0.730	0.822	0.849	0.868	0.646	0.425	
PR = 1.2001	INCID-R	-9.3	-7.6	-5.5	-6.8	-9.6	-8.0	-5.5	
TR = 1.0645	DEVIATION	12.5	11.4	11.0	11.8	13.0	12.8	11.0	
EFF-A = 0.8326	OMEGA-BAR	0.174	0.140	0.074	0.053	0.039	0.128	0.298	
EFF-P = 0.8335	LOSS PAR	0.060	0.050	0.028	0.021	0.016	0.054	0.130	
	D-FACTOR	0.513	0.471	0.419	0.388	0.352	0.431	0.582	
	TURNING	33.0	32.3	33.4	31.5	29.6	34.7	41.2	

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Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 32)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.483	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24209.0	P-STATIC	14.102	14.102	14.105	14.111	14.120	14.132	14.140	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.583	-4.190	-5.735	-7.284	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	269.969	269.856	269.162	267.766	265.646	262.785	261.042	
	VZ-BAR	269.969	269.856	269.162	267.766	265.646	262.785	261.042	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.243	0.243	0.242	0.241	0.239	0.237	0.235	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.670	14.671	14.678	14.690	14.691	14.692	14.691	14.685
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.909	13.910	13.916	13.923	13.932	13.942	13.946	
	BETABAR	7.570	9.974	11.654	12.034	11.935	6.149	2.719	
	EPSILON	-0.000	-0.883	-2.535	-4.127	-5.718	-7.306	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	306.677	306.695	307.001	307.803	306.234	304.259	303.214	
	VZ-BAR	304.005	302.050	300.673	301.038	299.607	302.486	302.872	
	V-THET-BAR	40.398	53.117	62.013	64.176	63.331	32.588	14.384	
	MACH-BAR	0.277	0.277	0.277	0.278	0.276	0.274	0.274	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.5	-3.8	-3.5	-4.5	-5.9	-13.1	-17.2	
	OMEGABAR	0.042	0.040	0.028	0.007	0.005	0.005	0.006	
	TURNING	-7.6	-10.0	-11.7	-12.0	-11.9	-6.1	-2.7	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.670	14.671	14.678	14.690	14.691	14.692	14.691	14.685
WCOR= 2.484	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24209.0	P-STATIC	13.459	13.464	13.471	13.474	13.477	13.477	13.475	
	BETABAR	5.953	7.939	9.371	9.777	9.680	4.981	2.222	
	EPSILON	-1.170	-1.788	-3.165	-4.389	-5.570	-6.537	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	389.210	388.522	388.599	389.811	389.548	389.569	389.848	
	VZ-BAR	387.111	384.790	383.414	384.150	383.996	388.080	389.555	
	V-THET-BAR	40.366	53.661	63.271	66.195	65.501	33.823	15.115	
	MACH-BAR	0.353	0.352	0.352	0.353	0.353	0.353	0.353	
	U-WHEEL	530.484	546.278	577.858	609.441	641.025	672.609	688.401	
	V-BAR-PR	624.556	625.085	641.724	665.350	691.874	747.438	777.861	
	BETABAR-PR	51.697	52.006	53.310	54.734	56.287	58.718	59.947	
	V-THET-B-P	-490.118	-492.612	-514.587	-543.246	-575.524	-638.786	-673.286	
	MACH-BAR-P	0.566	0.567	0.582	0.603	0.627	0.678	0.705	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.794	18.001	18.136	18.057	18.035	17.705	17.471	17.977
ROTOR	T-TOTAL	552.93	552.66	553.36	552.37	551.93	554.14	557.60	552.96
-----	P-STATIC	14.827	14.903	15.064	15.224	15.363	15.475	15.519	
PR = 1.2242	BETABAR	48.176	47.058	47.100	45.933	44.382	44.857	49.641	
TR = 1.0660	EPSILON	-2.886	-2.799	-3.249	-4.278	-5.498	-6.265	-6.418	
EFF-A = 0.9034	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.9035	V-BAR	580.831	590.501	585.903	561.979	544.909	501.164	472.148	
	VZ-BAR	387.326	402.289	398.839	390.852	389.435	355.261	305.754	
	V-THET-BAR	432.831	432.265	429.197	403.797	381.133	353.488	359.775	
	MACH-BAR	0.517	0.526	0.522	0.500	0.484	0.443	0.415	
	U-WHEEL	524.251	539.630	570.389	601.149	631.910	662.669	678.049	
	V-BAR-PR	397.969	416.378	423.134	437.892	463.231	470.968	481.344	
	BETABAR-PR	13.280	14.940	19.493	26.786	32.775	41.033	46.149	
	V-THET-B-P	-91.420	-107.364	-141.193	-197.352	-250.777	-309.182	-318.274	
	MACH-BAR-P	0.354	0.371	0.377	0.389	0.411	0.416	0.388	
	D-FACTOR	0.581	0.550	0.556	0.543	0.522	0.559	0.630	
	TURNING	38.4	37.1	33.8	27.9	23.5	17.7	13.8	
	INCID-R	-5.7	-4.1	-2.0	-0.8	-0.6	0.1	0.2	
	DEVIATION	25.1	18.7	10.9	9.1	7.6	9.8	12.3	
	OMEGABAR-P	0.153	0.087	0.071	0.062	0.051	0.162	0.269	
	LOSS PAR	0.052	0.030	0.025	0.022	0.018	0.058	0.084	
	PT-RATIO	1.213	1.227	1.236	1.229	1.228	1.205	1.189	1.2242
	EFF-AD	0.860	0.920	0.933	0.937	0.943	0.802	0.678	0.9034
	EFF-POLY	0.863	0.921	0.934	0.937	0.944	0.807	0.685	0.9035
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.794	17.997	18.136	18.058	18.038	17.710	17.471	17.977
	T-TOTAL	552.93	552.66	553.36	552.39	551.92	554.09	557.60	552.96
	P-STATIC	14.854	14.893	15.005	15.134	15.257	15.365	15.410	
	BETABAR	48.588	47.076	46.659	45.238	43.571	43.753	48.240	
	EPSILON	-0.113	-0.797	-2.532	-4.122	-5.416	-7.045	-7.979	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	577.946	591.250	591.935	571.444	556.478	514.565	485.790	
	VZ-BAR	382.295	402.665	406.268	402.386	403.173	371.690	323.541	
	V-THET-BAR	433.442	432.933	430.503	405.746	383.555	355.838	362.372	
	MACH-BAR	0.514	0.527	0.527	0.509	0.495	0.455	0.427	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.310	17.551	17.867	17.859	17.898	17.389	16.828	17.703
ROTOR PLUS STATOR	T-TOTAL	552.93	552.66	553.36	552.39	551.92	554.14	557.60	552.96
----------	P-STATIC	15.948	15.953	15.950	15.929	15.900	15.853	15.827	
PR = 1.2055	BETABAR	15.456	13.947	12.165	12.161	12.563	11.089	8.495	
TR = 1.0660	EPSILON	0.450	-0.087	-1.303	-2.574	-3.793	-4.994	-5.489	
EFF-A = 0.8304	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8348	V-BAR	392.138	422.689	460.479	461.888	469.572	416.621	341.081	
	VZ-BAR	377.956	410.230	450.139	451.524	458.329	408.840	337.339	
	V-THET-BAR	104.504	101.836	97.035	97.297	102.139	80.135	50.383	
IGV,ROTOR,STATOR	MACH-BAR	0.344	0.372	0.406	0.407	0.415	0.366	0.297	
----------	EFF-POLY	0.719	0.731	0.802	0.821	0.839	0.626	0.415	
PR = 1.2047	INCID-R	-7.1	-5.6	-4.2	-5.3	-7.9	-9.9	-6.5	
TR = 1.0660	DEVIATION	14.7	12.6	11.3	11.8	13.2	13.1	11.4	
EFF-A = 0.8306	OMEGA-BAR	0.165	0.184	0.086	0.068	0.050	0.137	0.312	
EFF-P = 0.8320	LOSS PAR	0.056	0.051	0.032	0.026	0.020	0.058	0.136	
	D-FACTOR	0.523	0.489	0.438	0.409	0.369	0.425	0.586	
	TURNING	33.1	33.1	34.5	33.1	31.0	32.7	39.7	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 33)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.335	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24284.0	P-STATIC	14.163	14.163	14.166	14.171	14.179	14.190	14.197	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.596	-4.249	-5.788	-7.288	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	255.499	255.390	254.739	253.419	251.425	248.746	247.105	
	VZ-BAR	255.499	255.390	254.739	253.419	251.425	248.746	247.105	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.230	0.230	0.229	0.228	0.226	0.224	0.222	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.673	14.674	14.680	14.690	14.691	14.692	14.692	14.686
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.971	13.972	13.976	13.983	13.991	14.000	14.005	
	BETABAR	7.333	9.656	11.638	12.004	12.053	9.843	6.089	
	EPSILON	-0.000	-0.910	-2.542	-4.166	-5.733	-7.282	-8.118	
	K-BAR	0.930	0.930	0.930	0.930	0.929	0.929	0.930	
	V-BAR	294.436	294.493	294.634	295.314	293.845	291.926	290.902	
	VZ-BAR	292.028	290.135	288.576	288.656	287.367	287.618	289.261	
	V-THET-BAR	37.578	50.407	59.436	61.418	61.358	49.903	30.856	
	MACH-BAR	0.266	0.266	0.266	0.266	0.265	0.263	0.262	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.7	-3.9	-3.5	-4.5	-5.8	-9.4	-13.8	
	OMEGABAR	0.041	0.039	0.028	0.008	0.006	0.006	0.006	
	TURNING	-7.3	-9.9	-11.6	-12.0	-12.1	-9.8	-6.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.673	14.674	14.680	14.691	14.691	14.692	14.692	14.686
WCOR= 2.336	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24284.0	P-STATIC	13.560	13.565	13.570	13.574	13.577	13.578	13.577	
	BETABAR	5.785	7.863	9.377	9.760	9.841	8.041	4.990	
	EPSILON	-1.170	-1.811	-3.197	-4.627	-5.817	-6.765	-6.637	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	372.551	371.966	372.044	373.104	372.707	372.477	372.774	
	VZ-BAR	370.654	368.460	367.072	367.703	367.223	368.606	371.362	
	V-THET-BAR	37.548	50.887	60.618	63.248	63.703	52.100	32.423	
	MACH-BAR	0.337	0.337	0.337	0.338	0.338	0.337	0.338	
	U-WHEEL	532.127	547.966	579.648	611.330	643.011	674.693	690.534	
	V-BAR-PR	618.655	618.750	635.718	660.002	685.897	723.635	755.658	
	BETABAR-PR	53.151	53.452	54.730	56.142	57.629	59.357	60.565	
	V-THET-B-P	-494.578	-497.080	-519.030	-548.061	-579.308	-622.593	-658.111	
	MACH-BAR-P	0.560	0.560	0.576	0.598	0.621	0.655	0.684	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.624	17.867	18.129	17.978	17.916	17.758	17.486	17.926
ROTOR	T-TOTAL	553.87	553.26	553.62	552.79	552.50	554.51	558.22	553.40
	P-STATIC	14.967	15.043	15.216	15.362	15.493	15.607	15.652	
PR = 1.2206	BETABAR	50.547	50.396	48.732	48.422	47.811	49.654	56.644	
TR = 1.0669	EPSILON	-2.885	-2.421	-3.193	-4.442	-5.577	-6.406	-6.416	
EFF-A = 0.8786	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.8797	V-BAR	569.198	564.662	569.785	540.118	519.468	491.271	457.087	
	VZ-BAR	361.692	359.955	375.816	358.439	348.865	318.064	251.326	
	V-THET-BAR	439.506	435.057	428.269	404.040	384.889	374.367	381.790	
	MACH-BAR	0.506	0.502	0.506	0.479	0.460	0.433	0.401	
	U-WHEEL	525.675	541.302	572.156	603.012	633.867	664.722	680.150	
	V-BAR-PR	371.661	375.326	402.451	410.009	428.613	430.704	390.107	
	BETABAR-PR	13.430	16.442	20.946	29.033	35.513	42.400	49.891	
	V-THET-B-P	-86.370	-106.245	-143.687	-198.972	-248.978	-290.355	-298.359	
	MACH-BAR-P	0.330	0.334	0.358	0.384	0.380	0.380	0.342	
	D-FACTOR	0.624	0.615	0.565	0.584	0.571	0.601	0.689	
	TURNING	39.7	37.0	33.8	27.1	22.1	17.0	10.7	
	INCID-M	-4.2	-2.7	-0.5	0.6	0.7	0.7	0.8	
	DEVIATION	25.3	20.2	12.3	11.4	10.3	11.2	16.0	
	OMEGABAR-P	0.178	0.147	0.083	0.094	0.095	0.168	0.293	
	LOSS PAR	0.061	0.051	0.029	0.033	0.033	0.055	0.085	
	PT-RATIO	1.215	1.218	1.235	1.224	1.219	1.209	1.190	1.2206
	EFF-AD	0.844	0.869	0.924	0.905	0.896	0.807	0.670	0.8786
	EFF-POLY	0.847	0.872	0.925	0.906	0.898	0.811	0.678	0.8797
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.824	17.865	18.127	17.983	17.917	17.765	17.486	17.926
	T-TOTAL	553.87	553.27	553.62	552.81	552.50	554.42	558.22	553.40
	P-STATIC	14.977	15.025	15.161	15.289	15.414	15.525	15.572	
	BETABAR	50.775	50.311	48.300	47.749	47.079	46.662	55.357	
	EPSILON	-0.113	-1.250	-2.452	-3.982	-5.416	-6.903	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	568.147	566.312	575.310	548.523	528.517	501.558	467.416	
	VZ-BAR	359.277	361.661	382.712	368.811	359.912	331.287	265.710	
	V-THET-BAR	440.126	435.783	429.545	406.024	387.032	376.560	384.546	
	MACH-BAR	0.505	0.503	0.512	0.487	0.469	0.443	0.410	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.396	17.483	17.891	17.799	17.701	17.436	17.030	17.658
ROTOR PLUS STATOR	T-TOTAL	553.87	553.28	553.62	552.83	552.49	554.35	558.22	553.40
	P-STATIC	16.046	16.049	16.050	16.031	16.003	15.965	15.941	
PR = 1.2023	BETABAR	15.679	14.079	12.682	12.325	12.482	11.244	8.961	
TR = 1.0669	EPSILON	0.450	-0.059	-1.220	-2.425	-3.626	-4.769	-5.489	
EFF-A = 0.8081	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8131	V-BAR	389.542	400.616	450.721	442.254	434.226	407.651	354.131	
	VZ-BAR	375.048	388.582	439.726	432.062	423.964	399.237	349.809	
	V-THET-BAR	105.273	97.421	98.947	94.400	93.846	79.375	55.159	
IGV,ROTOR,STATOR	MACH-BAR	0.342	0.352	0.397	0.389	0.382	0.357	0.309	
	EFF-POLY	0.738	0.751	0.812	0.819	0.755	0.604	0.469	
PR = 1.2016	INCID-M	-4.9	-2.3	-2.5	-2.8	-4.4	-5.0	0.6	
TR = 1.0669	DEVIATION	14.9	12.8	11.8	12.0	13.1	13.2	11.9	
EFF-A = 0.8080	OMEGA-BAR	0.150	0.135	0.080	0.068	0.086	0.147	0.238	
EFF-P = 0.8165	LOSS PAR	0.051	0.047	0.030	0.027	0.035	0.062	0.104	
	D-FACTOR	0.523	0.510	0.437	0.423	0.412	0.450	0.558	
	TURNING	35.1	36.2	35.6	35.4	34.6	37.4	46.4	

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Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 34)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.213	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24179.0	P-STATIC	14.228	14.229	14.231	14.236	14.243	14.252	14.258	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.932	-2.613	-4.233	-5.785	-7.284	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	239.055	238.960	238.356	237.140	235.285	232.807	231.267	
	VZ-BAR	239.055	238.960	238.356	237.140	235.285	232.807	231.267	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.215	0.215	0.214	0.213	0.212	0.209	0.208	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.675	14.676	14.681	14.691	14.691	14.691	14.692	14.687
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.047	14.048	14.053	14.059	14.067	14.075	14.080	
	BETABAR	7.127	9.767	11.558	12.003	12.137	9.916	5.943	
	EPSILON	-0.000	-0.884	-2.535	-4.148	-5.706	-7.260	-8.118	
	K-BAR	0.930	0.930	0.930	0.930	0.929	0.929	0.930	
	V-BAR	276.116	276.213	276.220	276.802	277.250	275.317	274.470	
	VZ-BAR	275.966	274.169	272.578	272.707	271.053	271.193	272.995	
	V-THET-BAR	34.505	47.195	55.746	57.979	58.292	47.412	28.419	
	MACH-BAR	0.251	0.251	0.251	0.251	0.250	0.248	0.247	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.0	-4.0	-3.6	-4.5	-5.7	-9.3	-14.0	
	OMEGABAR	0.042	0.039	0.029	0.008	0.007	0.007	0.006	
	TURNING	-7.1	-9.8	-11.6	-12.0	-12.1	-9.9	-5.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.675	14.676	14.681	14.691	14.691	14.691	14.692	14.687
WCOR= 2.214	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24179.0	P-STATIC	13.681	13.685	13.689	13.695	13.702	13.708	13.706	
	BETABAR	5.629	7.802	9.319	9.776	9.944	8.141	4.895	
	EPSILON	-1.170	-1.939	-3.891	-5.785	-7.372	-7.905	-6.637	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	351.525	351.133	351.129	351.742	350.504	349.514	349.950	
	VZ-BAR	349.830	347.873	346.494	346.634	345.239	345.983	348.674	
	V-THET-BAR	34.477	47.666	56.860	59.723	60.525	49.494	29.863	
	MACH-BAR	0.318	0.318	0.318	0.318	0.317	0.316	0.316	
	U-WHEEL	529.826	545.597	577.142	608.687	640.231	671.776	687.548	
	V-BAR-PR	606.425	607.414	625.104	649.246	674.725	712.000	744.395	
	BETABAR-PR	54.769	55.060	56.337	57.736	59.224	60.525	62.070	
	V-THET-B-P	-495.349	-497.931	-520.281	-548.963	-579.706	-622.261	-657.685	
	MACH-BAR-P	0.548	0.549	0.565	0.587	0.610	0.644	0.673	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.624	16.168	18.354	18.119	17.958	17.584	17.427	18.057
ROTOR	T-TOTAL	554.23	553.67	553.90	552.18	552.91	555.90	558.22	553.61
	P-STATIC	15.174	15.260	15.438	15.562	15.701	15.810	15.866	
PR = 1.2295	BETABAR	53.954	50.266	49.347	48.619	50.701	58.765	64.675	
TR = 1.0673	EPSILON	-2.685	-2.327	-3.484	-5.302	-6.765	-7.048	-6.418	
EFF-A = 0.9065	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.9062	V-BAR	547.027	570.389	566.507	529.036	499.986	447.620	421.185	
	VZ-BAR	321.890	364.611	369.062	349.731	316.684	232.225	180.165	
	V-THET-BAR	442.296	438.621	429.793	396.947	386.888	382.463	380.706	
	MACH-BAR	0.485	0.507	0.503	0.469	0.442	0.393	0.369	
	U-WHEEL	523.602	538.961	569.683	600.405	631.126	661.848	677.209	
	V-BAR-PR	331.999	378.169	394.716	404.659	399.969	363.616	346.948	
	BETABAR-PR	14.176	15.384	20.757	30.188	37.645	50.303	58.716	
	V-THET-B-P	-81.305	-100.340	-139.890	-203.458	-244.238	-279.386	-296.503	
	MACH-BAR-P	0.294	0.336	0.351	0.359	0.354	0.319	0.304	
	D-FACTOR	0.686	0.607	0.595	0.585	0.613	0.700	0.743	
	TURNING	40.6	39.7	35.6	27.5	21.6	10.6	3.4	
	INCID-M	-2.6	-1.1	1.1	2.2	2.3	2.3	2.3	
	DEVIATION	26.0	19.1	12.2	12.5	12.5	19.1	24.9	
	OMEGABAR-P	0.197	0.073	0.033	0.042	0.097	0.239	0.313	
	LOSS PAR	0.067	0.025	0.012	0.015	0.032	0.067	0.073	
	PT-RATIO	1.215	1.239	1.250	1.233	1.222	1.197	1.186	1.2295
	EFF-AD	0.835	0.938	0.971	0.958	0.896	0.737	0.657	0.9065
	EFF-POLY	0.838	0.939	0.971	0.958	0.898	0.743	0.664	0.9062
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.624	18.180	18.358	18.125	17.965	17.595	17.427	18.057
	T-TOTAL	554.23	553.68	553.95	552.20	552.85	555.83	558.22	553.61
	P-STATIC	15.178	15.252	15.406	15.536	15.634	15.719	15.771	
	BETABAR	54.127	50.352	49.160	48.243	49.846	56.818	61.999	
	EPSILON	-0.113	-1.347	-3.040	-4.246	-5.388	-6.822	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	546.600	570.546	570.483	534.635	508.490	460.073	434.292	
	VZ-BAR	320.301	364.055	373.069	356.052	327.913	251.886	203.893	
	V-THET-BAR	442.921	439.278	431.590	398.825	388.613	384.839	383.454	
	MACH-BAR	0.485	0.507	0.507	0.474	0.450	0.404	0.380	
STATOR TRAILING EDGE	DIAMETER	4.964	5.098	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.431	17.756	17.943	17.789	17.689	17.336	17.177	17.698
ROTOR PLUS STATOR	T-TOTAL	554.23	553.69	553.94	552.31	552.60	555.38	558.22	553.61
	P-STATIC	16.354	16.360	16.356	16.339	16.317	16.290	16.277	
PR = 1.2050	BETABAR	15.458	14.521	13.053	12.756	12.813	11.961	10.162	
TR = 1.0673	EPSILON	0.450	-0.072	-0.888	-1.682	-2.647	-4.100	-5.469	
EFF-A = 0.8132	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8181	V-BAR	346.616	392.076	416.849	399.078	389.101	342.917	319.917	
	VZ-BAR	334.066	379.557	406.077	389.229	379.412	335.466	314.898	
	V-THET-BAR	92.382	98.275	94.148	88.114	86.288	71.083	56.446	
IGV,ROTOR,STATOR	MACH-BAR	0.303	0.344	0.366	0.351	0.342	0.299	0.276	
	EFF-POLY	0.769	0.747	0.723	0.721	0.754	0.748	0.685	
PR = 1.2044	INCID-M	-1.5	-2.3	-1.7	-2.3	-1.7	3.2	7.2	
TR = 1.0673	DEVIATION	14.7	13.2	12.2	12.4	13.4	13.9	13.1	
EFF-A = 0.8137	OMEGA-BAR	0.149	0.145	0.141	0.130	0.118	0.138	0.151	
EFF-P = 0.8157	LOSS PAR	0.051	0.051	0.052	0.050	0.048	0.058	0.066	
	D-FACTOR	0.593	0.530	0.497	0.491	0.488	0.559	0.601	
	TURNING	38.7	35.8	36.1	35.5	37.0	44.9	51.8	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 35)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.175	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24211.0	P-STATIC	14.244	14.244	14.247	14.252	14.259	14.268	14.274	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.615	-4.227	-5.761	-7.286	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	234.896	234.805	234.161	232.913	231.017	228.452	226.866	
	VZ-BAR	234.896	234.805	234.161	232.913	231.017	228.452	226.686	
	V-THET-BAR	0.000	0.001	0.006	0.000	0.000	0.000	0.000	
	MACH-BAR	0.211	0.211	0.211	0.209	0.208	0.205	0.204	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.675	14.677	14.681	14.691	14.691	14.691	14.692	14.687
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.097	14.098	14.102	14.108	14.115	14.122	14.126	
	BETABAR	6.977	9.768	11.524	11.978	12.140	9.920	5.955	
	EPSILON	-0.000	-0.661	-2.559	-4.135	-5.710	-7.280	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	266.752	266.639	266.870	267.666	266.214	264.452	263.777	
	VZ-BAR	264.777	263.006	261.490	261.837	260.260	260.468	262.355	
	V-THET-BAR	32.401	44.994	52.314	55.551	55.985	45.556	27.395	
	MACH-BAR	0.240	0.240	0.240	0.241	0.240	0.238	0.238	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.1	-4.1	-3.6	-4.5	-5.7	-9.3	-14.0	
	OMEGABAR	0.042	0.039	0.029	0.019	0.008	0.008	0.006	
	TURNING	-7.0	-9.7	-11.5	-12.0	-12.1	-9.9	-6.0	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.675	14.677	14.681	14.691	14.691	14.691	14.692	14.687
WCOR= 2.176	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24211.0	P-STATIC	13.762	13.766	13.771	13.775	13.780	13.783	13.762	
	BETABAR	5.519	7.769	9.311	9.779	9.958	8.151	4.904	
	EPSILON	-1.170	-1.829	-3.262	-4.756	-6.326	-7.316	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	336.643	336.160	336.013	336.891	336.143	335.455	335.679	
	VZ-BAR	335.083	333.066	331.585	331.996	331.079	332.058	334.647	
	V-THET-BAR	32.375	45.437	54.366	57.221	58.130	47.559	28.744	
	MACH-BAR	0.304	0.304	0.304	0.304	0.304	0.303	0.304	
	U-WHEEL	530.527	546.319	577.905	609.492	641.078	672.665	688.456	
	V-BAR-PR	600.363	601.512	619.715	644.382	670.407	707.831	734.737	
	BETABAR-PR	56.073	56.378	57.651	58.967	60.435	62.021	63.103	
	V-THET-B-P	-498.152	-500.882	-523.540	-552.271	-582.948	-625.105	-659.713	
	MACH-BAR-P	0.543	0.544	0.560	0.582	0.606	0.640	0.668	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.824	17.972	18.114	18.087	18.034	17.695	17.396	17.963
ROTOR	T-TOTAL	554.33	554.39	554.71	553.03	552.96	555.92	558.17	554.15
PR = 1.2244	P-STATIC	15.107	15.187	15.368	15.529	15.663	15.780	15.837	
TR = 1.0684	BETABAR	52.653	52.450	51.807	48.969	48.690	55.532	63.915	
EFF-A = 0.8740	EPSILON	-2.866	-2.622	-3.409	-4.765	-6.145	-6.817	-6.418	
EFF-P = 0.8749	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	554.421	559.330	552.938	532.265	512.055	463.601	421.592	
	VZ-BAR	336.335	340.884	341.885	349.410	338.031	262.490	185.378	
	V-THET-BAR	440.750	443.449	434.570	401.515	384.611	381.928	378.648	
	MACH-BAR	0.492	0.496	0.490	0.472	0.453	0.408	0.369	
	U-WHEEL	524.295	539.674	570.437	601.199	631.961	662.724	678.105	
	V-BAR-PR	346.556	354.214	367.935	402.470	418.894	364.661	352.192	
	BETABAR-PR	13.950	15.762	21.667	29.743	36.197	46.970	56.241	
	V-THET-B-P	-83.544	-96.224	-135.867	-199.684	-247.351	-280.795	-299.457	
	MACH-BAR-P	0.307	0.314	0.326	0.357	0.371	0.338	0.308	
	D-FACTOR	0.659	0.647	0.638	0.588	0.580	0.667	0.734	
	TURNING	42.1	40.6	36.0	29.2	24.2	15.1	4.9	
	INCID-M	-1.3	0.2	2.4	3.4	3.5	3.4	3.3	
	DEVIATION	25.8	19.5	13.1	12.1	11.0	15.8	24.4	
	OMEGABAR-P	0.205	0.163	0.126	0.077	0.082	0.222	0.321	
	LOSS PAR	0.070	0.056	0.045	0.027	0.028	0.066	0.070	
	PT-RATIO	1.215	1.225	1.234	1.231	1.228	1.204	1.184	1.2244
	EFF-AD	0.632	0.867	0.892	0.926	0.914	0.762	0.651	0.8740
	EFF-POLY	0.636	0.870	0.894	0.927	0.916	0.767	0.659	0.8749
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.824	17.970	18.113	18.088	18.038	17.702	17.398	17.963
	T-TOTAL	554.33	554.39	554.73	553.07	552.92	555.86	558.17	554.15
	P-STATIC	15.113	15.169	15.316	15.466	15.598	15.715	15.771	
	BETABAR	52.853	52.340	51.347	48.469	48.022	54.474	62.313	
	EPSILON	-0.113	-1.098	-2.956	-4.304	-5.369	-6.776	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	553.730	560.957	556.360	539.176	519.809	472.551	430.648	
	VZ-BAR	334.376	342.731	348.756	357.478	347.677	274.665	200.125	
	V-THET-BAR	441.373	444.081	436.064	403.630	386.415	384.340	381.361	
	MACH-BAR	0.491	0.496	0.495	0.478	0.460	0.416	0.377	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.465	17.763	17.956	17.803	17.689	17.358	16.875	17.704
ROTOR PLUS STATOR	T-TOTAL	554.33	554.39	554.71	553.04	552.88	555.67	558.17	554.15
PR = 1.2055	P-STATIC	16.416	16.418	16.410	16.391	16.366	16.341	16.326	
TR = 1.0684	BETABAR	15.447	13.742	13.152	12.891	12.582	11.803	10.715	
EFF-A = 0.8023	EPSILON	0.450	-0.153	-1.536	-2.709	-3.493	-4.530	-5.489	
EFF-P = 0.8074	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	341.662	384.885	411.465	393.730	381.981	337.791	250.651	
	VZ-BAR	329.513	373.873	400.673	383.807	372.607	330.642	246.280	
	V-THET-BAR	91.056	91.389	93.619	87.839	83.212	69.123	46.604	
IGV,ROTOR,STATOR	MACH-BAR	0.299	0.337	0.361	0.346	0.335	0.295	0.217	
	EFF-POLY	0.802	0.871	0.888	0.786	0.712	0.679	0.531	
PR = 1.2048	INCID-M	-2.8	-0.3	0.5	-2.0	-3.5	0.8	7.5	
TR = 1.0684	DEVIATION	14.7	12.4	12.3	12.5	13.2	13.8	13.7	
EFF-A = 0.8026	OMEGA-BAR	0.132	0.074	0.056	0.109	0.143	0.173	0.521	
EFF-P = 0.8052	LOSS PAR	0.045	0.026	0.021	0.042	0.058	0.073	0.139	
	D-FACTOR	0.607	0.543	0.498	0.505	0.511	0.581	0.766	
	TURNING	37.4	38.6	38.2	35.6	35.4	42.7	51.6	

Table C-3. Nominal Scaled Stage Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 36)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	I-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOI= 2.125	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCORR=4190.0	I-STATIC	14.266	14.266	14.268	14.272	14.279	14.287	14.293	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.932	-2.613	-4.233	-5.785	-7.284	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	229.159	229.068	228.486	227.323	225.549	223.167	221.704	
	V2-BAR	229.159	229.068	228.486	227.323	225.549	223.167	221.704	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.206	0.206	0.205	0.204	0.203	0.201	0.199	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	I-TOTAL	14.676	14.676	14.682	14.691	14.691	14.691	14.692	14.687
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	I-STATIC	14.125	14.126	14.130	14.136	14.143	14.150	14.154	
	BETABAR	6.888	9.638	11.544	11.992	12.121	9.890	5.922	
	EISILON	-0.000	-0.884	-2.535	-4.148	-5.706	-7.260	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	260.401	260.572	260.536	261.146	259.590	257.733	257.065	
	V2-BAR	258.522	256.883	255.265	255.447	253.803	253.893	255.694	
	V-THET-BAR	31.230	43.623	52.139	54.260	54.509	44.269	26.521	
	MACH-BAR	0.234	0.235	0.235	0.235	0.234	0.232	0.231	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.2	-4.1	-3.6	-4.5	-5.8	-9.3	-14.0	
	OMEGABAR	0.042	0.039	0.030	0.009	0.008	0.008	0.006	
	TURNING	-6.9	-9.6	-11.5	-12.0	-12.1	-9.9	-5.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	I-TOTAL	14.676	14.678	14.682	14.691	14.691	14.691	14.692	14.687
WCOI= 2.126	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCORR=4190.0	I-STATIC	13.806	13.809	13.813	13.818	13.825	13.831	13.829	
	BETABAR	5.453	7.720	9.327	9.788	9.951	8.142	4.889	
	EISILON	-1.170	-1.854	-3.852	-6.008	-7.890	-8.789	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	328.397	328.080	328.752	328.847	327.529	326.295	326.976	
	V2-BAR	326.911	325.097	323.813	324.060	322.602	322.998	325.786	
	V-THET-BAR	31.205	44.068	53.183	55.902	56.598	46.212	27.868	
	MACH-BAR	0.297	0.296	0.296	0.296	0.296	0.295	0.295	
	U-WHEEL	530.067	545.845	577.404	608.963	640.522	672.082	687.861	
	V-BAR-R	596.435	597.887	616.170	641.010	667.116	704.304	736.021	
	BETABAR-R	56.763	57.061	58.295	59.632	61.080	62.701	63.728	
	V-THET-B-R	-498.862	-501.776	-524.221	-553.061	-583.924	-625.869	-659.993	
	MACH-BAR-R	0.539	0.540	0.557	0.579	0.603	0.636	0.665	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	I-TOTAL	17.824	18.174	18.487	18.290	18.061	17.619	17.339	18.163
ROTOR	T-TOTAL	554.49	553.94	554.08	552.82	552.94	556.40	558.12	553.86
-----	I-STATIC	15.289	15.374	15.551	15.698	15.815	15.919	15.974	
ER = 1.2367	BETABAR	55.742	51.707	49.038	48.595	50.335	60.895	73.375	
TR = 1.0678	EPSILON	-2.885	-2.243	-3.497	-5.449	-7.000	-7.201	-6.416	
EFF-A = 0.9262	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.9255	V-BAR	534.491	557.377	566.518	532.625	497.327	436.824	394.093	
	V2-BAR	300.876	345.408	371.382	352.264	317.459	212.581	112.750	
	V-THET-BAR	441.762	437.417	427.804	399.500	382.786	381.411	377.620	
	MACH-BAR	0.473	0.495	0.503	0.472	0.440	0.383	0.348	
	U-WHEEL	523.840	539.206	569.942	600.678	631.414	662.149	677.517	
	V-BAR-R	311.870	360.097	397.675	405.710	403.280	352.412	320.392	
	BETABAR-R	15.259	16.415	20.941	29.730	38.075	52.904	69.396	
	V-THET-B-R	-82.677	-101.789	-142.138	-201.175	-248.627	-280.738	-299.897	
	MACH-BAR-R	0.276	0.320	0.353	0.360	0.357	0.309	0.280	
	D-FACTOR	0.717	0.633	0.586	0.583	0.605	0.717	0.776	
	TURNING	41.5	40.6	37.4	29.9	23.0	9.8	-5.7	
	INCID-R	-0.6	0.9	3.0	4.1	4.2	4.1	3.9	
	DEVIATION	27.1	20.2	12.3	12.1	12.9	21.7	35.5	
	OMEGABAR-R	0.213	0.089	0.001	0.018	0.074	0.247	0.335	
	LOSS BAR	0.072	0.031	0.001	0.006	0.025	0.066	0.053	
	PI-RATIO	1.214	1.238	1.259	1.245	1.229	1.199	1.180	1.236
	EFF-AD	0.828	0.927	0.998	0.983	0.922	0.734	0.638	0.9262
	EFF-POLY	0.832	0.929	0.997	0.982	0.923	0.740	0.646	0.9255
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	I-TOTAL	17.824	18.166	18.490	18.298	18.076	17.636	17.339	18.163
	T-TOTAL	554.49	553.95	554.12	552.86	552.83	556.27	558.12	553.86
	I-STATIC	15.296	15.364	15.520	15.658	15.763	15.859	15.917	
	BETABAR	55.992	51.778	48.886	48.302	49.563	59.228	70.916	
	EISILON	-0.113	-1.423	-3.040	-4.256	-5.302	-6.536	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	533.665	557.723	569.944	537.800	504.756	446.840	402.464	
	V2-BAR	298.484	345.088	374.769	357.749	327.393	228.759	131.585	
	V-THET-BAR	442.386	438.095	429.400	401.553	384.176	383.571	380.345	
	MACH-BAR	0.472	0.495	0.506	0.477	0.447	0.392	0.352	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	I-TOTAL	17.465	17.764	17.958	17.795	17.654	17.406	16.875	17.707
ROTOR PLUS STATOR	T-TOTAL	554.49	553.96	554.11	553.02	552.61	555.58	558.12	553.86
----------	I-STATIC	16.376	16.380	16.377	16.361	16.340	16.316	16.303	
ER = 1.2057	BETABAR	15.070	14.953	13.391	13.296	13.013	12.247	11.250	
TR = 1.0678	EPSILON	0.850	-0.123	-0.918	-1.510	-2.131	-3.512	-5.489	
EFF-A = 0.8098	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8148	V-BAR	348.556	390.265	415.865	397.034	380.899	349.285	256.478	
	V2-BAR	336.568	377.053	404.558	386.391	371.117	341.328	251.550	
	V-THET-BAR	90.625	100.686	96.310	91.312	85.769	74.125	50.034	
IGV,ROTOR,STATOR	MACH-BAR	0.305	0.342	0.365	0.349	0.334	0.305	0.223	
----------	EFF-POLY	0.769	0.740	0.648	0.603	0.617	0.769	0.468	
PR = 1.2050	INCID-R	0.3	-0.9	-1.9	-2.2	-1.9	5.6	16.1	
TR = 1.0678	DEVIATION	14.3	13.6	12.5	12.9	13.6	18.2	18.2	
EFF-A = 0.8102	OMEGA-BAR	0.142	0.144	0.179	0.190	0.182	0.129	0.326	
EFF-P = 0.8126	LOSS BAR	0.049	0.050	0.066	0.074	0.073	0.054	0.141	
	D-FACTOR	0.580	0.520	0.494	0.499	0.501	0.535	0.731	
	TURNING	40.9	36.8	35.5	35.0	36.5	47.0	59.7	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units

(Data Point No. 37)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.392	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34235.0	P-STATIC	13.514	13.515	13.521	13.534	13.554	13.579	13.594	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.638	-4.252	-5.796	-7.295	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	383.864	383.697	382.590	380.417	377.141	372.817	370.200	
	VZ-BAR	383.864	383.697	382.590	380.417	377.141	372.817	370.200	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.348	0.348	0.347	0.345	0.342	0.338	0.335	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.640	14.642	14.652	14.676	14.676	14.674	14.671	14.665
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.078	13.081	13.091	13.107	13.125	13.146	13.157	
	BETABAR	7.750	10.202	11.802	12.309	12.142	9.897	5.018	
	EPSILON	-0.000	-0.910	-2.573	-4.198	-5.759	-7.291	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	444.605	444.446	444.303	445.148	442.442	439.097	437.003	
	VZ-BAR	440.544	437.404	434.911	434.916	432.544	432.540	435.328	
	V-THET-BAR	59.954	78.715	90.869	94.895	93.060	75.468	38.226	
	MACH-BAR	0.405	0.404	0.404	0.405	0.403	0.399	0.397	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.3	-3.6	-3.3	-4.2	-5.7	-9.3	-14.9	
	OMEGABAR	0.046	0.045	0.036	0.015	0.016	0.018	0.021	
	TURNING	-7.7	-10.2	-11.8	-12.3	-12.1	-9.9	-5.0	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.640	14.642	14.653	14.677	14.676	14.674	14.671	14.665
WCOR= 3.399	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34235.0	P-STATIC	12.027	12.037	12.049	12.056	12.061	12.062	12.058	
	BETABAR	5.693	7.841	9.162	9.641	9.544	7.769	3.952	
	EPSILON	-1.170	-1.771	-3.132	-4.449	-5.635	-6.468	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	583.449	582.343	582.033	583.551	582.845	582.567	582.801	
	VZ-BAR	580.365	576.886	574.607	575.310	574.778	577.203	581.415	
	V-THET-BAR	59.906	79.443	92.677	97.725	96.642	78.745	40.168	
	MACH-BAR	0.537	0.536	0.536	0.537	0.537	0.536	0.537	
	U-WHEEL	750.180	772.510	817.174	861.838	906.502	951.166	973.498	
	V-BAR-PR	901.833	901.744	924.705	956.483	993.103	1046.088	1099.613	
	BETABAR-PR	49.944	50.227	51.581	53.023	54.635	56.509	58.079	
	V-THET-B-P	-690.274	-693.067	-724.497	-764.113	-809.860	-872.421	-933.330	
	MACH-BAR-P	0.831	0.830	0.851	0.881	0.915	0.963	1.013	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.763	21.295	21.752	21.388	21.288	20.845	20.498	21.294
ROTOR	T-TOTAL	585.09	584.65	586.39	583.10	584.22	588.32	590.28	585.39
	P-STATIC	14.370	14.496	14.796	15.104	15.373	15.632	15.759	
PR = 1.4520	BETABAR	45.607	44.532	44.291	42.938	43.025	44.601	43.071	
TR = 1.1266	EPSILON	-2.885	-2.726	-3.165	-4.336	-5.478	-6.270	-6.418	
EFF-A = 0.8757	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
EFF-P = 0.8810	V-BAR	837.564	854.918	856.925	814.136	789.485	746.894	716.354	
	VZ-BAR	585.939	609.441	613.387	596.015	577.159	531.801	523.302	
	V-THET-BAR	598.489	599.552	598.393	554.600	538.674	524.440	489.201	
	MACH-BAR	0.744	0.762	0.763	0.723	0.698	0.654	0.624	
	U-WHEEL	741.367	763.114	806.613	850.112	893.611	937.110	958.859	
	V-BAR-PR	603.107	631.017	647.823	665.318	677.587	673.153	703.152	
	BETABAR-PR	13.704	15.021	18.748	26.370	31.591	37.810	41.908	
	V-THET-B-P	-142.878	-163.562	-208.220	-295.512	-354.936	-412.669	-469.658	
	MACH-BAR-P	0.536	0.562	0.577	0.591	0.599	0.590	0.613	
	D-FACTOR	0.539	0.506	0.506	0.494	0.504	0.544	0.542	
	TURNING	36.2	35.2	32.8	26.7	23.0	18.7	16.2	
	INCID-M	-7.4	-5.9	-3.7	-2.5	-2.3	-2.1	-1.7	
	DEVIATION	25.6	18.8	10.1	8.7	6.4	6.6	8.1	
	OMEGABAR-P	0.190	0.118	0.088	0.081	0.102	0.187	0.229	
	LOSS PAR	0.065	0.041	0.032	0.029	0.036	0.065	0.076	
	PT-RATIO	1.418	1.454	1.484	1.457	1.451	1.421	1.397	1.4520
	EFF-AD	0.820	0.889	0.916	0.915	0.888	0.786	0.727	0.8757
	EFF-POLY	0.829	0.894	0.920	0.919	0.893	0.796	0.739	0.8810
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.763	21.285	21.753	21.395	21.292	20.850	20.498	21.294
	T-TOTAL	585.09	584.64	586.41	583.15	584.15	588.28	590.28	585.39
	P-STATIC	14.396	14.446	14.618	14.853	15.092	15.343	15.472	
	BETABAR	45.823	44.406	43.654	42.004	41.887	43.300	41.746	
	EPSILON	-0.113	-0.590	-2.506	-4.132	-5.141	-6.996	-7.979	
	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
	V-BAR	835.671	858.049	869.658	832.884	810.646	770.014	740.031	
	VZ-BAR	582.362	612.999	629.216	618.908	603.499	560.398	552.142	
	V-THET-BAR	599.334	600.391	600.324	557.355	541.232	528.087	492.732	
	MACH-BAR	0.743	0.765	0.775	0.741	0.719	0.677	0.647	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.353	20.228	21.183	20.944	20.715	19.993	19.396	20.592
ROTOR PLUS STATOR	T-TOTAL	585.09	584.62	586.42	583.15	584.18	588.33	590.28	585.39
	P-STATIC	17.089	17.113	17.118	17.076	17.016	16.937	16.892	
PR = 1.4041	BETABAR	15.624	14.033	12.649	12.102	12.713	12.469	11.537	
TR = 1.1286	EPSILON	0.450	0.078	-1.295	-2.591	-3.783	-4.985	-5.489	
EFF-A = 0.7921	K-BAR	0.905	0.905	0.905	0.905	0.905	0.905	0.905	
EFF-P = 0.8018	V-BAR	376.689	571.204	645.065	630.108	619.375	571.941	523.989	
	VZ-BAR	362.771	554.187	629.408	616.104	604.192	558.451	513.402	
	V-THET-BAR	101.449	138.357	141.254	132.105	136.298	123.487	104.797	
IGV,ROTOR,STATOR	MACH-BAR	0.321	0.494	0.560	0.548	0.538	0.493	0.449	
	EFF-POLY	0.581	0.767	0.854	0.866	0.811	0.699	0.613	
PR = 1.4013	INCID-M	-9.8	-8.2	-7.2	-8.5	-9.6	-10.3	-13.0	
TR = 1.1286	DEVIATION	14.8	12.7	11.8	11.7	13.3	14.4	14.5	
EFF-A = 0.7881	OMEGA-BAR	0.378	0.155	0.080	0.069	0.093	0.156	0.219	
EFF-P = 0.7971	LOSS PAR	0.129	0.054	0.030	0.027	0.038	0.066	0.095	
	D-FACTOR	0.760	0.529	0.461	0.449	0.446	0.488	0.528	
	TURNING	30.2	30.4	31.0	29.9	29.2	30.8	30.2	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 38)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.372	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34244.0	P-STATIC	13.602	13.603	13.609	13.622	13.640	13.663	13.677	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.927	-2.633	-4.270	-5.807	-7.293	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	368.771	368.615	367.535	365.411	362.255	358.059	355.537	
	VZ-BAR	368.771	368.615	367.535	365.411	362.255	358.059	355.537	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.000	0.000	0.000	
	MACH-BAR	0.334	0.334	0.333	0.331	0.328	0.324	0.322	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.641	14.643	14.654	14.677	14.677	14.675	14.672	14.666
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.140	13.143	13.154	13.168	13.185	13.205	13.215	
	BETABAR	8.613	9.992	11.521	12.116	11.945	9.999	5.851	
	EPSILON	-0.000	-0.904	-2.589	-4.192	-5.775	-7.295	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	435.501	435.249	435.144	436.143	433.505	430.319	428.418	
	VZ-BAR	430.590	428.642	426.376	426.427	424.118	423.766	426.186	
	V-THET-BAR	65.219	75.517	86.909	91.545	89.727	74.716	43.671	
	MACH-BAR	0.396	0.396	0.396	0.397	0.394	0.391	0.389	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.5	-3.8	-3.6	-4.4	-5.9	-9.2	-14.1	
	OMEGABAR	0.049	0.047	0.038	0.016	0.017	0.019	0.022	
	TURNING	-8.6	-10.0	-11.5	-12.1	-11.9	-10.0	-5.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.641	14.643	14.654	14.677	14.677	14.675	14.672	14.666
WCOR= 3.378	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34244.0	P-STATIC	12.143	12.153	12.162	12.168	12.174	12.176	12.172	
	BETABAR	6.570	7.696	8.974	9.517	9.419	7.882	4.625	
	EPSILON	-1.170	-1.720	-3.195	-4.619	-5.807	-6.577	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	569.581	568.527	568.546	570.124	569.314	568.870	569.095	
	VZ-BAR	565.840	563.402	561.585	562.277	561.638	563.483	567.242	
	V-THET-BAR	65.167	76.131	88.689	94.261	93.171	78.012	45.890	
	MACH-BAR	0.524	0.523	0.523	0.524	0.524	0.523	0.523	
	U-WHEEL	750.377	772.713	817.388	862.065	906.740	951.416	973.754	
	V-BAR-PR	888.644	895.909	919.994	951.676	988.607	1039.405	1087.518	
	BETABAR-PR	50.450	51.033	52.379	53.783	55.380	57.170	58.561	
	V-THET-B-P	-685.210	-696.582	-728.699	-767.804	-813.570	-873.404	-927.864	
	MACH-BAR-P	0.817	0.824	0.846	0.875	0.909	0.956	1.000	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.689	21.442	22.128	21.615	21.497	21.019	20.689	21.524
ROTOR	T-TOTAL	585.77	584.92	586.70	584.60	585.98	589.79	592.87	586.50
PR = 1.4676	P-STATIC	14.673	14.809	15.135	15.448	15.723	15.980	16.112	
TR = 1.1307	BETABAR	48.677	45.428	44.508	44.485	44.827	46.840	46.832	
EFF-A = 0.8876	EPSILON	-2.885	-2.470	-3.174	-4.435	-5.597	-6.318	-6.418	
EFF-P = 0.8923	K-BAR	0.865	0.865	0.865	0.865	0.865	0.865	0.865	
	V-BAR	811.156	839.635	851.360	801.648	775.804	730.528	700.799	
	VZ-BAR	535.611	589.273	607.147	571.928	550.235	499.714	479.448	
	V-THET-BAR	609.174	598.069	596.814	561.727	546.911	532.876	511.125	
	MACH-BAR	0.718	0.747	0.757	0.719	0.684	0.638	0.608	
	U-WHEEL	741.562	763.314	806.824	850.335	893.846	937.356	959.111	
	V-BAR-PR	551.730	612.015	642.485	640.684	650.496	642.901	656.172	
	BETABAR-PR	13.884	15.659	19.080	26.776	32.232	38.988	43.057	
	V-THET-B-P	-132.387	-165.245	-210.011	-288.608	-346.935	-404.480	-447.986	
	MACH-BAR-P	0.488	0.544	0.571	0.567	0.573	0.562	0.570	
	D-FACTOR	0.592	0.525	0.510	0.522	0.534	0.574	0.587	
	TURNING	36.6	35.4	33.3	27.0	23.1	18.2	15.5	
	INCID-M	-6.9	-5.1	-2.9	-1.8	-1.5	-1.5	-1.2	
	DEVIATION	25.7	19.4	10.5	9.1	7.0	7.8	9.2	
	OMEGABAR-P	0.214	0.106	0.050	0.078	0.104	0.190	0.244	
	LOSS PAR	0.073	0.037	0.018	0.028	0.037	0.065	0.080	
	PT-RATIO	1.413	1.464	1.510	1.473	1.465	1.432	1.410	1.4676
	EFF-AD	0.803	0.902	0.953	0.920	0.888	0.789	0.722	0.8876
	EFF-POLY	0.812	0.907	0.956	0.924	0.894	0.799	0.735	0.8923
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.689	21.427	22.128	21.627	21.501	21.025	20.689	21.524
	T-TOTAL	585.77	584.92	586.70	584.64	585.91	589.74	592.87	586.50
	P-STATIC	14.733	14.794	14.972	15.216	15.468	15.728	15.850	
	BETABAR	49.142	45.509	43.920	43.544	43.730	45.597	45.437	
	EPSILON	-0.113	-0.759	-2.400	-3.999	-5.197	-6.937	-7.979	
	K-BAR	0.865	0.865	0.865	0.865	0.865	0.865	0.865	
	V-BAR	806.573	839.932	862.786	819.264	795.021	750.934	722.564	
	VZ-BAR	527.652	588.647	621.469	593.837	574.488	525.435	507.015	
	V-THET-BAR	610.035	599.076	598.478	564.404	549.563	536.487	514.814	
	MACH-BAR	0.714	0.747	0.768	0.727	0.702	0.657	0.629	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.397	20.369	21.520	21.217	20.909	20.253	19.722	20.845
ROTOR PLUS STATOR	T-TOTAL	585.77	584.92	586.69	584.66	585.89	589.73	592.87	586.50
PR = 1.4213	P-STATIC	17.435	17.448	17.440	17.402	17.348	17.283	17.246	
TR = 1.1307	BETABAR	16.502	14.379	12.822	12.252	13.175	12.997	12.074	
EFF-A = 0.8085	EPSILON	0.450	0.141	-1.146	-2.429	-3.657	-4.874	-5.489	
EFF-P = 0.8177	K-BAR	0.905	0.905	0.905	0.905	0.905	0.905	0.905	
	V-BAR	567.473	549.752	641.025	621.838	604.657	560.148	517.524	
	VZ-BAR	513.985	532.573	625.040	607.674	588.741	545.797	506.077	
	V-THET-BAR	93.018	136.320	142.254	131.963	137.817	125.983	108.249	
IGV,ROTOR,STATOR	MACH-BAR	0.278	0.474	0.556	0.540	0.523	0.481	0.442	
	EFF-POLY	0.588	0.763	0.844	0.872	0.803	0.715	0.637	
PR = 1.4186	INCID-M	-6.5	-7.1	-6.9	-7.0	-7.8	-8.0	-9.3	
TR = 1.1307	DEVIATION	15.7	13.1	11.9	11.9	13.8	15.0	15.0	
EFF-A = 0.8048	OMEGA-BAR	0.385	0.159	0.085	0.064	0.098	0.146	0.200	
EFF-P = 0.8132	LOSS PAR	0.131	0.056	0.032	0.025	0.040	0.061	0.086	
	D-FACTOR	0.821	0.544	0.460	0.454	0.458	0.495	0.537	
	TURNING	32.6	31.1	31.1	31.3	30.6	32.6	33.4	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 39)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.320	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34201.0	P-STATIC	13.639	13.640	13.646	13.657	13.674	13.697	13.710	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.636	-4.225	-5.790	-7.295	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	362.327	362.167	361.136	359.140	356.094	352.042	349.587	
	VZ-BAR	362.327	362.167	361.136	359.140	356.094	352.042	349.587	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.328	0.328	0.327	0.325	0.322	0.318	0.316	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.644	14.646	14.657	14.679	14.679	14.677	14.675	14.668
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.176	13.179	13.188	13.203	13.220	13.240	13.250	
	BETABAR	8.313	10.253	11.821	12.396	12.089	9.768	5.847	
	EPSILON	-0.000	-0.910	-2.561	-4.167	-5.729	-7.291	-8.118	
	K-BAR	0.945	0.945	0.945	0.945	0.944	0.944	0.945	
	V-BAR	430.334	430.266	430.242	431.059	428.421	425.200	423.287	
	VZ-BAR	425.812	423.385	421.117	421.009	418.949	419.019	421.085	
	V-THET-BAR	62.218	76.582	88.136	92.537	89.731	72.140	43.118	
	MACH-BAR	0.391	0.391	0.391	0.392	0.389	0.386	0.385	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.8	-3.5	-3.3	-4.1	-5.8	-9.5	-14.1	
	OMEGABAR	0.048	0.046	0.036	0.015	0.015	0.017	0.020	
	TURNING	-8.3	-10.3	-11.8	-12.4	-12.1	-9.8	-5.8	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.644	14.646	14.657	14.679	14.679	14.677	14.675	14.668
WCOR= 3.326	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34201.0	P-STATIC	12.210	12.220	12.227	12.232	12.238	12.240	12.236	
	BETABAR	6.357	7.922	9.226	9.754	9.544	7.711	4.628	
	EPSILON	-1.170	-1.597	-3.012	-4.265	-5.884	-6.661	-6.847	
	K-BAR	0.945	0.945	0.945	0.945	0.945	0.945	0.945	
	V-BAR	561.493	560.530	560.820	562.475	561.703	561.229	561.503	
	VZ-BAR	558.041	555.173	553.565	554.344	553.927	556.141	559.672	
	V-THET-BAR	62.168	77.248	89.912	95.289	93.136	75.306	45.308	
	MACH-BAR	0.516	0.515	0.515	0.517	0.516	0.516	0.516	
	U-WHEEL	749.435	771.742	816.362	860.982	905.602	950.221	972.531	
	V-BAR-PR	885.294	889.125	913.331	945.300	983.334	1036.718	1083.040	
	BETABAR-PR	50.924	51.301	52.691	54.096	55.713	57.556	58.885	
	V-THET-B-P	-687.267	-694.494	-726.450	-765.692	-812.466	-874.915	-927.223	
	MACH-BAR-P	0.814	0.817	0.839	0.869	0.904	0.953	0.995	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.498	21.563	22.479	22.223	21.880	21.442	20.998	21.908
ROTOR	T-TOTAL	587.17	587.05	588.66	585.98	588.33	592.29	595.62	588.53
	P-STATIC	15.153	15.343	15.731	16.065	16.328	16.577	16.700	
PR = 1.4936	BETABAR	54.038	49.668	47.743	46.537	48.387	50.281	51.710	
TR = 1.1346	EPSILON	-2.885	-2.227	-3.643	-4.407	-5.631	-6.384	-6.418	
EFF-A = 0.9036	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.9075	V-BAR	763.774	808.212	828.084	789.495	753.019	710.248	673.223	
	VZ-BAR	448.529	523.129	556.842	543.080	500.082	453.885	417.161	
	V-THET-BAR	618.200	615.988	612.899	573.032	562.982	546.312	528.399	
	MACH-BAR	0.671	0.714	0.743	0.697	0.660	0.618	0.581	
	U-WHEEL	740.630	762.356	805.812	849.268	892.723	936.179	957.906	
	V-BAR-PR	464.938	543.222	589.370	609.359	599.027	598.339	598.749	
	BETABAR-PR	15.267	15.627	19.104	26.959	33.401	40.662	45.835	
	V-THET-B-P	-122.430	-146.368	-192.913	-276.235	-329.740	-389.867	-429.507	
	MACH-BAR-P	0.409	0.480	0.521	0.538	0.525	0.520	0.517	
	D-FACTOR	0.693	0.606	0.570	0.556	0.591	0.623	0.645	
	TURNING	35.7	35.7	33.6	27.1	22.3	16.9	13.0	
	INCID-M	-6.5	-4.8	-2.6	-1.5	-1.2	-1.1	-0.9	
	DEVIATION	27.1	19.4	10.5	9.3	8.2	9.4	12.0	
	OMEGABAR-P	0.262	0.127	0.040	0.030	0.097	0.181	0.246	
	LOSS PAR	0.088	0.044	0.014	0.011	0.034	0.060	0.078	
	PT-RATIO	1.400	1.472	1.534	1.514	1.491	1.461	1.431	1.4936
	EFF-AD	0.764	0.887	0.964	0.970	0.900	0.806	0.727	0.9036
	EFF-POLY	0.775	0.893	0.966	0.971	0.905	0.816	0.740	0.9075
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.498	21.539	22.475	22.235	21.889	21.452	20.998	21.908
	T-TOTAL	587.17	587.03	588.69	586.01	588.24	592.21	595.62	588.53
	P-STATIC	15.251	15.353	15.598	15.865	16.136	16.396	16.524	
	BETABAR	54.982	49.933	47.265	45.693	47.444	49.329	50.669	
	EPSILON	-0.113	-0.702	-2.554	-3.781	-5.013	-6.400	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	755.919	806.214	837.172	804.520	767.878	725.227	688.063	
	VZ-BAR	433.775	519.017	568.105	561.960	519.331	472.640	436.096	
	V-THET-BAR	619.074	616.801	614.900	575.719	565.615	550.060	532.213	
	MACH-BAR	0.664	0.712	0.741	0.711	0.675	0.632	0.595	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.485	20.551	21.810	21.594	21.175	20.664	20.278	21.164
ROTOR PLUS STATOR	T-TOTAL	587.17	586.97	588.73	586.04	588.15	592.11	595.62	588.53
	P-STATIC	17.914	17.933	17.946	17.910	17.856	17.793	17.756	
PR = 1.4428	BETABAR	18.082	15.205	13.235	12.717	13.457	13.433	13.053	
TR = 1.1346	EPSILON	0.450	0.115	-1.212	-2.429	-3.574	-4.767	-5.489	
EFF-A = 0.8202	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8293	V-BAR	250.979	517.096	619.083	605.276	579.604	545.544	516.201	
	VZ-BAR	238.584	499.047	602.640	590.428	563.693	530.618	502.865	
	V-THET-BAR	77.898	135.387	141.729	133.242	134.875	126.738	116.580	
IGV,ROTOR,STATOR	MACH-BAR	0.212	0.444	0.535	0.524	0.500	0.467	0.440	
	EFF-POLY	0.608	0.767	0.821	0.803	0.755	0.688	0.672	
PR = 1.4463	INCID-M	-0.7	-2.7	-3.6	-4.8	-4.1	-3.3	-4.1	
TR = 1.1346	DEVIATION	17.3	13.9	12.3	12.4	14.1	15.4	16.0	
EFF-A = 0.8171	OMEGA-BAR	0.384	0.160	0.097	0.101	0.124	0.156	0.181	
EFF-P = 0.8253	LOSS PAR	0.129	0.056	0.036	0.039	0.050	0.066	0.069	
	D-FACTOR	0.922	0.573	0.477	0.470	0.482	0.505	0.521	
	TURNING	36.9	34.7	34.0	33.0	34.0	35.9	37.6	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 40)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.295	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=342.5.0	P-STATIC	13.633	13.634	13.640	13.652	13.669	13.691	13.705	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.611	-4.256	-5.788	-7.290	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	363.334	363.170	362.167	360.142	357.100	353.040	350.571	
	VZ-BAR	363.334	363.170	362.167	360.142	357.100	353.040	350.571	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.329	0.329	0.328	0.326	0.323	0.319	0.317	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.645	14.647	14.658	14.680	14.680	14.678	14.676	14.670
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.220	13.223	13.233	13.247	13.264	13.283	13.293	
	BETABAR	9.127	10.166	11.626	12.341	12.042	9.822	5.902	
	EPSILON	-0.000	-0.910	-2.542	-4.175	-5.733	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	423.697	423.612	423.656	424.477	421.948	418.740	416.879	
	VZ-BAR	418.333	416.959	414.963	414.669	412.663	412.586	414.665	
	V-THET-BAR	67.211	74.764	85.372	90.720	88.032	71.432	42.864	
	MACH-BAR	0.385	0.385	0.385	0.386	0.383	0.380	0.379	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.0	-3.6	-3.5	-4.2	-5.8	-9.4	-14.0	
	OMEGABAR	0.047	0.045	0.035	0.014	0.014	0.016	0.019	
	TURNING	-9.1	-10.2	-11.6	-12.3	-12.0	-9.8	-5.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.645	14.647	14.658	14.680	14.680	14.678	14.676	14.670
WCOR= 3.301	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=342.5.0	P-STATIC	12.293	12.302	12.308	12.310	12.316	12.319	12.315	
	BETABAR	6.996	7.867	9.099	9.727	9.526	7.770	4.682	
	EPSILON	-1.170	-1.512	-2.965	-4.578	-6.037	-6.764	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	551.365	550.480	550.957	552.890	552.169	551.599	551.844	
	VZ-BAR	547.260	545.296	544.023	544.943	544.555	546.523	550.003	
	V-THET-BAR	67.157	75.344	87.127	93.408	91.379	74.572	45.041	
	MACH-BAR	0.506	0.505	0.506	0.508	0.507	0.506	0.507	
	U-WHEEL	750.399	772.735	817.413	862.089	906.767	951.444	973.782	
	V-BAR-PR	875.393	885.274	910.651	942.254	980.515	1033.250	1079.381	
	BETABAR-PR	51.306	51.977	53.315	54.665	56.262	58.065	59.366	
	V-THET-R-P	-683.242	-697.392	-730.285	-768.682	-815.388	-876.872	-928.742	
	MACH-BAR-P	0.804	0.813	0.836	0.865	0.900	0.949	0.991	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.410	21.505	22.484	22.324	22.028	21.493	21.101	21.969
ROTOR	T-TOTAL	587.84	587.75	589.43	586.58	589.65	593.98	596.61	589.50
	P-STATIC	15.423	15.601	15.980	16.326	16.619	16.891	17.021	
PR = 1.4976	BETABAR	58.432	51.930	49.293	47.771	50.301	53.729	54.784	
TR = 1.1305	EPSILON	-2.885	-2.066	-2.807	-4.274	-5.622	-6.473	-6.418	
EFF-A = 0.8977	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9018	V-BAR	737.036	786.422	811.351	776.347	740.241	688.942	653.291	
	VZ-BAR	385.851	484.990	529.152	521.776	472.832	407.588	376.729	
	V-THET-BAR	627.966	618.904	615.045	574.860	569.549	555.436	533.726	
	MACH-BAR	0.645	0.693	0.716	0.684	0.647	0.597	0.563	
	U-WHEEL	741.583	763.337	806.848	850.360	893.872	937.383	959.139	
	W-BAR-PR	402.231	506.042	562.898	590.099	573.373	558.621	568.244	
	BETABAR-PR	16.408	16.577	19.919	27.833	34.447	43.139	48.473	
	V-THET-R-P	-113.618	-144.433	-191.804	-275.500	-324.323	-381.947	-425.413	
	MACH-BAR-P	0.352	0.446	0.497	0.520	0.501	0.484	0.489	
	D-FACTOR	0.763	0.648	0.600	0.577	0.620	0.664	0.675	
	TURNING	34.9	35.4	33.4	26.8	21.8	14.9	10.9	
	INCID-M	-0.1	-4.2	-2.0	-0.9	-0.6	-0.6	-0.4	
	DEVIATION	28.3	20.3	11.3	10.2	9.3	11.9	14.6	
	OMEGABAR-P	0.288	0.147	0.052	0.028	0.100	0.197	0.252	
	LOSS PAR	0.097	0.051	0.019	0.010	0.035	0.063	0.075	
	PT-RATIO	1.394	1.468	1.534	1.521	1.501	1.464	1.438	1.4976
	EFF-AD	0.747	0.871	0.953	0.972	0.899	0.793	0.728	0.8977
	EFF-POLY	0.758	0.878	0.956	0.974	0.904	0.804	0.741	0.9018
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.410	21.481	22.478	22.334	22.039	21.503	21.101	21.969
	T-TOTAL	587.84	587.74	589.47	586.61	589.53	593.91	596.61	589.50
	P-STATIC	15.471	15.595	15.855	16.151	16.427	16.684	16.814	
	BETABAR	59.061	52.134	48.821	47.010	49.233	52.366	53.237	
	EPSILON	-0.113	-0.779	-2.517	-3.899	-5.185	-6.344	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	733.172	785.516	819.842	789.494	755.224	706.305	671.039	
	VZ-BAR	376.941	482.252	539.790	538.333	493.158	431.279	401.625	
	V-THET-BAR	628.853	619.841	617.053	577.493	571.966	559.343	537.578	
	MACH-BAR	0.642	0.692	0.724	0.696	0.662	0.613	0.579	
STATOR TRAILING EDGE	DIAMETER	4.964	5.098	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	18.544	20.629	21.863	21.704	21.297	20.862	20.431	21.283
ROTOR PLUS STATOR	T-TOTAL	587.84	587.66	589.53	586.64	589.32	593.76	596.61	589.50
	P-STATIC	18.088	18.104	18.117	18.085	18.034	17.976	17.941	
PR = 1.4509	BETABAR	17.357	14.837	13.466	13.054	13.700	14.039	14.162	
TR = 1.1365	EPSILON	0.450	0.117	-1.215	-2.350	-3.379	-4.683	-5.489	
EFF-A = 0.8219	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8310	V-BAR	223.897	506.711	608.462	598.188	573.162	545.080	511.111	
	VZ-BAR	213.702	489.848	591.735	582.731	556.855	528.800	495.576	
	V-THET-BAR	66.794	129.617	141.690	135.105	135.746	132.222	125.054	
IGV,ROTOR,STATOR	MACH-BAR	0.189	0.434	0.525	0.517	0.493	0.466	0.435	
	EFF-POLY	0.619	0.787	0.824	0.796	0.738	0.716	0.666	
PR = 1.4484	INCID-M	3.4	-0.5	-2.0	-3.5	-2.3	-1.3	-1.5	
TR = 1.1365	DEVIATION	16.6	13.5	12.6	12.7	14.3	16.0	17.1	
EFF-A = 0.8191	OMEGA-BAR	0.378	0.145	0.093	0.102	0.132	0.133	0.156	
EFF-P = 0.8272	LOSS PAR	0.128	0.051	0.034	0.040	0.053	0.056	0.067	
	D-FACTOR	0.966	0.579	0.480	0.469	0.485	0.496	0.515	
	TURNING	41.7	37.3	35.4	34.0	35.5	38.3	39.1	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 41)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
NCOR= 3.245	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34101.0	P-STATIC	13.666	13.669	13.675	13.686	13.702	13.724	13.736	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.611	-4.225	-5.770	-7.290	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	357.134	356.983	355.996	354.021	351.025	347.031	344.602	
	VZ-BAR	357.134	356.983	355.996	354.021	351.025	347.031	344.602	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.323	0.323	0.322	0.320	0.317	0.314	0.312	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.647	14.649	14.660	14.681	14.682	14.680	14.678	14.671
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.239	13.241	13.251	13.265	13.281	13.301	13.309	
	BETABAR	8.296	10.286	11.811	12.329	12.009	9.590	5.894	
	EPSILON	-0.000	-0.910	-2.542	-4.167	-5.729	-7.241	-8.116	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	421.163	421.186	421.215	422.010	419.517	416.312	414.506	
	VZ-BAR	416.757	414.404	412.297	412.278	410.335	410.479	412.316	
	V-THET-BAR	60.769	75.221	86.213	90.109	67.288	69.358	42.568	
	MACH-BAR	0.363	0.363	0.383	0.383	0.381	0.378	0.376	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.6	-3.5	-3.3	-4.2	-5.9	-9.6	-14.0	
	OMEGABAR	0.047	0.044	0.034	0.013	0.013	0.015	0.018	
	TURNING	-8.3	-10.3	-11.8	-12.3	-12.0	-9.6	-5.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.647	14.649	14.661	14.682	14.682	14.680	14.678	14.671
NCOR= 3.250	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34101.0	P-STATIC	12.325	12.335	12.339	12.341	12.345	12.347	12.344	
	BETABAR	6.367	7.960	9.247	9.726	9.503	7.590	4.678	
	EPSILON	-1.170	-1.428	-2.814	-4.458	-5.985	-6.785	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	547.519	546.592	547.262	549.254	548.692	548.209	548.485	
	VZ-BAR	544.141	541.292	540.150	541.360	541.163	543.395	546.656	
	V-THET-BAR	60.720	75.678	87.942	92.788	90.585	72.404	44.736	
	MACH-BAR	0.502	0.502	0.502	0.504	0.504	0.503	0.503	
	U-WHEEL	747.244	769.466	813.975	858.464	902.954	947.443	969.688	
	V-BAR-PR	876.016	879.825	904.926	937.731	976.120	1030.041	1074.421	
	BETABAR-PR	51.600	52.031	53.351	54.738	56.329	58.159	59.417	
	V-THET-B-P	-666.513	-693.606	-726.033	-765.676	-812.369	-875.639	-924.958	
	MACH-BAR-P	0.804	0.807	0.830	0.861	0.896	0.945	0.986	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.278	21.472	22.432	22.425	22.173	21.625	21.233	22.034
ROTOR	T-TOTAL	588.72	588.18	589.70	586.69	590.19	594.85	598.06	589.95
	P-STATIC	15.520	15.698	16.096	16.460	16.758	17.038	17.173	
PR = 1.5018	BETABAR	61.024	53.454	50.730	48.347	51.049	54.847	56.890	
TR = 1.1374	EPSILON	-2.885	-2.081	-2.697	-4.156	-5.559	-6.409	-6.416	
EFF-A = 0.8990	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.9028	V-BAR	721.261	777.545	800.562	772.030	738.341	685.932	650.181	
	VZ-BAR	349.423	463.087	506.715	513.103	464.163	394.945	355.160	
	V-THET-BAR	630.996	624.409	619.772	576.850	574.192	560.812	544.667	
	MACH-BAR	0.630	0.684	0.705	0.680	0.645	0.594	0.559	
	U-WHEEL	738.405	760.126	803.455	846.784	890.113	933.442	955.106	
	V-BAR-PR	365.578	482.565	539.043	579.628	561.480	543.039	542.815	
	BETABAR-PR	17.097	16.331	19.916	27.746	34.241	43.335	49.134	
	V-THET-B-P	-107.475	-135.718	-163.683	-269.935	-315.921	-372.630	-410.499	
	MACH-BAR-P	0.319	0.424	0.475	0.510	0.491	0.470	0.467	
	D-FACTOR	0.809	0.675	0.625	0.587	0.632	0.682	0.702	
	TURNING	54.5	35.7	33.4	27.0	22.1	14.8	10.3	
	INCID-M	-5.8	-4.1	-1.9	-0.8	-0.6	-0.5	-0.4	
	DEVIATION	29.0	20.1	11.3	10.1	9.1	12.1	15.3	
	OMEGABAR-P	0.316	0.160	0.064	0.019	0.093	0.196	0.258	
	LOSS PAR	0.107	0.055	0.023	0.007	0.032	0.063	0.076	
	PT-RATIO	1.384	1.466	1.530	1.527	1.510	1.473	1.447	1.5018
	EFF-AD	0.722	0.862	0.944	0.981	0.987	0.797	0.727	0.8990
	EFF-POLY	0.734	0.869	0.947	0.982	0.912	0.808	0.741	0.9028
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.278	21.447	22.424	22.431	22.183	21.635	21.233	22.034
	T-TOTAL	588.72	588.17	589.75	586.70	590.05	594.77	598.06	589.95
	P-STATIC	15.561	15.692	15.983	16.288	16.569	16.838	16.968	
	BETABAR	61.672	53.668	50.311	47.592	49.970	53.462	55.233	
	EPSILON	-0.113	-0.672	-2.601	-3.700	-5.094	-6.739	-7.479	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	717.848	776.583	808.298	784.711	752.999	702.767	667.742	
	VZ-BAR	340.633	460.209	516.177	529.215	484.322	418.396	380.770	
	V-THET-BAR	631.681	625.291	621.997	579.398	576.560	564.644	548.538	
	MACH-BAR	0.627	0.683	0.713	0.692	0.659	0.609	0.575	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.661	20.691	21.818	21.775	21.416	21.050	20.563	21.364
ROTOR PLUS STATOR	T-TOTAL	588.72	588.13	589.81	586.72	589.79	594.55	598.06	589.95
	P-STATIC	18.282	18.298	18.309	18.280	18.232	18.176	18.142	
PR = 1.4561	BETABAR	18.579	15.406	13.820	13.346	14.100	14.596	14.959	
TR = 1.1374	EPSILON	0.450	0.067	-1.270	-2.428	-3.382	-4.629	-5.489	
EFF-A = 0.8252	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8342	V-BAR	203.421	492.235	588.371	586.249	5641282	541.628	502.550	
	VZ-BAR	192.820	474.585	571.337	570.418	547.282	524.149	485.520	
	V-THET-BAR	64.812	130.611	140.547	135.321	137.465	136.489	129.719	
IGV,ROTOR,STATOR	MACH-BAR	0.172	0.421	0.507	0.506	0.485	0.463	0.427	
	EFF-POLY	0.659	0.810	0.829	0.794	0.738	0.744	0.675	
PR = 1.4538	INCID-M	6.0	1.0	-0.5	-2.9	-1.5	-0.2	0.5	
TR = 1.1374	DEVIATION	17.8	14.1	12.9	13.0	14.7	16.6	17.9	
EFF-A = 0.8231	OMEGA-BAR	0.343	0.131	0.094	0.107	0.137	0.122	0.157	
EFF-P = 0.8307	LOSS PAR	0.115	0.046	0.035	0.041	0.055	0.051	0.067	
	D-FACTOR	0.997	0.595	0.501	0.481	0.497	0.499	0.530	
	TURNING	43.1	38.3	36.5	34.2	35.9	38.9	40.3	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 42)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.198	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34198.0	P-STATIC	13.700	13.701	13.706	13.717	13.733	13.755	13.767	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.908	-2.609	-4.221	-5.767	-7.287	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	351.473	351.310	350.329	348.372	345.409	341.447	339.644	
	VZ-BAR	351.473	351.310	350.329	348.372	345.409	341.447	339.044	
	V-THET-BAR	0.000	0.001	0.000	0.001	0.001	0.000	0.000	
	MACH-BAR	0.318	0.318	0.317	0.315	0.312	0.309	0.306	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.649	14.652	14.662	14.683	14.683	14.681	14.679	14.673
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.319	13.322	13.332	13.345	13.360	13.377	13.386	
	BETABAR	8.988	10.278	11.655	12.198	11.925	9.239	5.489	
	EPSILON	-0.000	-0.899	-2.540	-4.136	-5.721	-7.287	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	408.738	408.698	408.771	409.638	407.225	404.197	404.582	
	VZ-BAR	403.741	402.135	400.343	400.390	398.435	398.938	400.736	
	V-THET-BAR	63.717	72.922	82.579	86.553	84.146	64.894	38.510	
	MACH-BAR	0.371	0.371	0.371	0.372	0.370	0.367	0.365	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.1	-3.5	-3.5	-4.3	-6.0	-10.0	-14.4	
	OMEGABAR	0.046	0.043	0.033	0.012	0.012	0.014	0.016	
	TURNING	-9.0	-10.3	-11.7	-12.2	-11.9	-9.2	-5.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.649	14.652	14.663	14.683	14.683	14.681	14.679	14.673
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR= 3.203	P-STATIC	12.471	12.481	12.483	12.483	12.487	12.491	12.486	
NCOR=34198.0	BETABAR	6.909	8.002	9.160	9.656	9.467	7.340	4.374	
	EPSILON	-1.170	-1.280	-2.686	-4.422	-6.090	-6.921	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	529.225	528.282	529.174	531.379	530.846	530.226	530.569	
	VZ-BAR	525.381	523.135	522.425	523.850	523.616	525.869	529.024	
	V-THET-BAR	63.666	73.535	84.236	89.131	87.310	67.738	40.466	
	MACH-BAR	0.485	0.484	0.485	0.487	0.486	0.486	0.486	
	U-WHEEL	749.369	771.675	816.291	860.906	905.522	950.138	972.446	
	V-BAR-PR	883.837	872.396	899.355	932.772	971.419	1027.220	1071.659	
	BETABAR-PR	52.541	53.154	54.486	55.832	57.382	59.206	60.419	
	V-THET-B-P	-685.703	-698.140	-732.054	-771.775	-818.212	-882.400	-931.980	
	MACH-BAR-P	0.791	0.799	0.824	0.855	0.890	0.941	0.982	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.160	21.557	22.544	22.620	22.377	21.760	21.292	22.191
ROTOR	T-TOTAL	589.30	588.96	590.71	587.14	591.16	598.29	598.89	590.82
	P-STATIC	15.709	15.896	16.296	16.665	16.964	17.247	17.381	
PR = 1.5124	BETABAR	65.907	54.745	51.661	48.486	51.569	56.130	58.710	
TR = 1.1390	EPSILON	-2.885	-1.978	-2.642	-4.161	-5.685	-6.450	-6.418	
EFF-A = 0.9046	K-BAR	0.965	0.965	0.965	0.965	0.965	0.965	0.965	
EFF-P = 0.9079	V-BAR	697.864	767.784	792.786	767.873	735.055	678.410	636.656	
	VZ-BAR	284.881	443.298	491.751	508.952	456.890	378.118	330.659	
	V-THET-BAR	627.067	626.587	621.817	574.975	575.804	563.240	544.054	
	MACH-BAR	0.808	0.674	0.697	0.675	0.642	0.586	0.546	
	U-WHEEL	740.565	762.289	805.741	849.193	892.645	936.097	957.823	
	V-BAR-PR	303.099	463.603	525.081	578.172	556.014	531.145	529.660	
	BETABAR-PR	19.967	17.020	20.496	28.313	34.741	44.600	51.370	
	V-THET-B-P	-103.499	-135.702	-183.924	-274.218	-316.841	-372.856	-413.768	
	MACH-BAR-P	0.264	0.407	0.462	0.508	0.485	0.459	0.454	
	D-FACTOR	0.890	0.695	0.641	0.587	0.639	0.696	0.715	
	TURNING	32.6	36.1	34.0	27.5	22.6	14.6	9.0	
	INCID-M	-4.6	-3.0	-0.8	0.3	0.5	0.6	0.6	
	DEVIATION	31.8	20.8	11.9	10.6	9.6	13.4	17.5	
	OMEGABAR-P	0.350	0.165	0.088	0.004	0.086	0.202	0.263	
	LOSS PAR	0.115	0.057	0.024	0.001	0.030	0.063	0.074	
	PT-RATIO	1.376	1.471	1.538	1.541	1.524	1.482	1.450	1.5124
	EFF-AD	0.702	0.861	0.942	0.996	0.916	0.796	0.725	0.9046
	EFF-POLY	0.715	0.869	0.946	0.996	0.921	0.807	0.739	0.9079
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.160	21.528	22.535	22.624	22.389	21.775	21.292	22.191
	T-TOTAL	589.30	588.94	590.78	587.16	591.00	598.20	598.89	590.82
	P-STATIC	15.743	15.887	16.186	16.505	16.792	17.061	17.194	
	BETABAR	66.627	54.978	51.266	47.799	50.576	54.763	57.066	
	EPSILON	-0.113	-0.590	-2.373	-3.696	-4.983	-6.654	-7.919	
	K-BAR	0.965	0.965	0.965	0.965	0.965	0.965	0.965	
	V-BAR	695.000	766.764	800.207	779.577	748.441	694.423	652.890	
	VZ-BAR	275.719	440.175	500.674	523.669	475.303	400.674	354.938	
	V-THET-BAR	637.967	627.490	624.199	577.503	578.132	567.160	547.981	
	MACH-BAR	0.605	0.673	0.704	0.686	0.654	0.601	0.561	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	18.779	20.831	21.920	21.847	21.518	21.173	20.604	21.472
ROTOR PLUS STATOR	T-TOTAL	589.30	588.89	590.84	587.17	590.62	595.95	598.89	590.82
	P-STATIC	18.511	18.522	18.516	18.487	18.447	18.399	18.371	
PR = 1.4634	BETABAR	20.178	15.557	13.913	13.588	14.348	14.657	15.030	
TR = 1.1390	EPSILON	0.450	-0.047	-1.395	-2.450	-3.297	-4.555	-5.489	
EFF-A = 0.8266	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8357	V-BAR	170.305	481.736	578.016	573.245	552.656	530.679	481.687	
	VZ-BAR	159.854	464.124	561.060	557.201	535.419	513.411	465.208	
	V-THET-BAR	58.741	129.048	138.976	134.672	130.948	134.272	124.914	
IGV,ROTOR,STATOR	MACH-BAR	0.143	0.412	0.497	0.494	0.474	0.452	0.408	
	EFF-POLY	0.695	0.823	0.866	0.763	0.714	0.739	0.667	
PR = 1.4613	INCID-M	11.0	2.3	0.4	-2.7	-0.9	1.1	2.3	
TR = 1.1390	DEVIATION	19.4	14.2	13.0	13.2	15.0	16.6	18.0	
EFF-A = 0.8250	OMEGA-BAR	0.313	0.124	0.097	0.127	0.156	0.128	0.108	
EFF-P = 0.8325	LOSS PAR	0.104	0.043	0.036	0.049	0.063	0.053	0.072	
	D-FACTOR	1.050	0.606	0.510	0.494	0.510	0.513	0.554	
	TURNING	46.4	39.4	37.4	34.2	36.2	40.1	42.0	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 43)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.122	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=33923.0	P-STATIC	13.730	13.731	13.736	13.746	13.761	13.782	13.794	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.609	-4.228	-5.782	-7.290	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	345.971	345.839	344.895	343.012	340.172	336.310	333.972	
	VZ-BAR	345.971	345.839	344.895	343.012	340.172	336.310	333.972	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.313	0.313	0.312	0.310	0.307	0.304	0.302	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.651	14.655	14.665	14.684	14.685	14.683	14.682	14.675
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.363	13.366	13.374	13.387	13.402	13.419	13.428	
	BETABAR	8.665	10.002	11.463	12.200	12.109	9.626	5.490	
	EPSILON	-0.000	-0.879	-2.548	-4.135	-5.713	-7.291	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	402.146	402.210	402.436	403.232	400.933	397.870	396.160	
	VZ-BAR	397.535	396.093	394.379	394.125	392.012	392.251	394.344	
	V-THET-BAR	60.723	69.855	80.118	85.214	84.104	66.528	37.901	
	MACH-BAR	0.365	0.365	0.365	0.366	0.364	0.361	0.359	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.4	-3.8	-3.7	-4.3	-5.8	-7.6	-14.4	
	OMEGABAR	0.045	0.041	0.031	0.011	0.010	0.012	0.014	
	TURNING	-8.7	-10.0	-11.5	-12.2	-12.1	-9.6	-5.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.651	14.655	14.666	14.685	14.685	14.683	14.682	14.675
WCOR= 3.126	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=33923.0	P-STATIC	12.545	12.554	12.556	12.556	12.562	12.566	12.562	
	BETABAR	6.702	7.798	9.045	9.676	9.037	7.662	4.384	
	EPSILON	-1.170	-1.225	-2.717	-4.480	-6.230	-7.019	-6.631	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	519.874	519.050	520.056	522.172	521.491	520.740	521.043	
	VZ-BAR	516.321	514.246	513.588	514.744	514.132	516.077	519.519	
	V-THET-BAR	60.674	70.419	81.756	87.762	87.302	69.430	39.826	
	MACH-BAR	0.476	0.475	0.476	0.478	0.477	0.477	0.477	
	U-WHEEL	743.343	765.469	809.726	853.983	898.241	942.498	964.626	
	V-BAR-PR	855.935	864.609	890.910	923.073	960.189	1014.196	1060.734	
	BETABAR-PR	52.899	53.503	54.796	56.106	57.625	59.411	60.674	
	V-THET-B-P	-682.669	-695.050	-727.970	-766.221	-810.939	-873.068	-924.801	
	MACH-BAR-P	0.784	0.791	0.810	0.845	0.879	0.929	0.971	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.028	21.599	22.522	22.614	22.357	21.698	21.306	22.161
ROTOR	T-TOTAL	590.18	589.78	590.99	587.17	591.13	596.54	600.14	591.05
PR = 1.5114	P-STATIC	15.689	15.892	16.365	16.676	16.977	17.256	17.392	
TR = 1.1395	BETABAR	69.136	55.409	52.283	48.908	52.309	57.795	60.627	
EFF-A = 0.9005	EPSILON	-2.885	-1.885	-2.419	-4.227	-5.756	-6.537	-6.418	
EFF-P = 0.9039	K-BAR	0.965	0.965	0.965	0.965	0.965	0.965	0.965	
	V-BAR	691.265	770.925	791.150	766.784	732.890	673.436	637.321	
	VZ-BAR	246.179	437.792	483.974	503.960	448.097	359.111	312.597	
	V-THET-BAR	645.077	634.230	625.021	577.894	579.923	570.012	555.392	
	MACH-BAR	0.601	0.677	0.695	0.674	0.640	0.581	0.546	
	U-WHEEL	734.610	756.159	799.262	842.365	885.467	928.569	950.120	
	V-BAR-PR	201.682	454.455	514.181	569.203	542.390	507.607	503.515	
	BETABAR-PR	19.822	15.558	14.704	27.686	34.293	44.960	51.023	
	V-THET-B-P	-86.734	-121.929	-173.441	-264.471	-305.544	-358.257	-394.728	
	MACH-BAR-P	0.228	0.399	0.452	0.508	0.473	0.438	0.432	
	D-FACTOR	0.932	0.708	0.653	0.594	0.650	0.718	0.741	
	TURNING	34.1	37.9	35.1	28.4	23.3	14.5	9.1	
	INCID-M	-4.5	-2.6	-0.5	0.6	0.7	0.8	0.9	
	DEVIATION	31.7	19.3	11.1	10.0	9.1	13.7	17.8	
	OMEGABAR-P	0.387	0.176	0.076	0.006	0.090	0.214	0.280	
	LOSS PAR	0.128	0.061	0.027	0.002	0.031	0.067	0.078	
	PT-RATIO	1.367	1.474	1.536	1.540	1.522	1.478	1.451	1.5114
	EFF-AD	0.678	0.855	0.936	0.995	0.914	0.787	0.715	0.9005
	EFF-POLY	0.692	0.863	0.939	0.995	0.919	0.798	0.730	0.9039
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.028	21.574	22.513	22.617	22.374	21.710	21.306	22.161
	T-TOTAL	590.18	589.77	591.08	587.20	590.98	596.44	600.14	591.05
	P-STATIC	15.713	15.874	16.195	16.535	16.805	17.070	17.204	
	BETABAR	69.812	55.564	51.881	48.329	51.251	56.819	58.838	
	EPSILON	-0.113	-0.982	-2.709	-3.716	-4.974	-6.601	-7.979	
	K-BAR	0.965	0.965	0.965	0.965	0.965	0.965	0.965	
	V-BAR	689.131	770.814	798.639	777.114	746.651	689.658	653.732	
	VZ-BAR	237.826	436.035	492.975	516.662	467.340	382.486	338.283	
	V-THET-BAR	646.789	635.253	626.306	580.487	582.303	573.852	559.401	
	MACH-BAR	0.599	0.676	0.702	0.684	0.653	0.596	0.561	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.985	20.849	21.884	21.757	21.451	21.116	20.918	21.422
ROTOR PLUS STATOR	T-TOTAL	590.18	589.74	591.13	587.22	590.53	596.02	600.14	591.05
PR = 1.4597	P-STATIC	18.540	18.555	18.566	18.537	18.494	18.446	18.415	
TR = 1.1395	BETABAR	18.937	16.040	14.640	13.811	14.360	14.648	14.983	
EFF-A = 0.8183	EPSILON	0.450	-0.136	-1.445	-2.409	-3.181	-4.446	-5.489	
EFF-P = 0.8277	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	218.933	480.374	570.935	561.759	542.534	520.894	476.654	
	VZ-BAR	207.663	461.712	553.342	545.518	525.589	503.964	462.382	
IGV,ROTOR,STATOR	V-THET-BAR	71.049	132.569	140.439	134.103	134.552	131.721	123.744	
	MACH-BAR	0.184	0.410	0.490	0.484	0.465	0.444	0.405	
PR = 1.4578	EFF-POLY	0.755	0.820	0.826	0.745	0.707	0.752	0.673	
TR = 1.1395	INCID-M	14.2	2.9	1.1	-2.2	-0.3	2.7	4.1	
EFF-A = 0.8173	DEVIATION	18.2	14.7	13.3	13.5	15.0	16.6	17.9	
EFF-P = 0.8249	OMEGA-BAR	0.242	0.127	0.099	0.141	0.166	0.128	0.168	
	LOSS PAR	0.081	0.044	0.037	0.055	0.067	0.054	0.072	
	D-FACTOR	0.976	0.613	0.519	0.509	0.526	0.530	0.568	
	TURNING	50.9	39.5	37.6	34.5	36.9	41.7	43.9	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 44)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.082	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34072.0	P-STATIC	13.756	13.757	13.762	13.772	13.787	13.807	13.819	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.615	-4.222	-5.774	-7.288	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	341.165	341.030	340.099	336.229	335.406	331.613	329.317	
	VZ-BAR	341.165	341.030	340.099	338.229	335.406	331.613	329.317	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.001	0.000	0.000	
	MACH-BAR	0.308	0.308	0.307	0.306	0.303	0.300	0.297	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.653	14.656	14.667	14.685	14.686	14.684	14.683	14.676
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.402	13.404	13.412	13.424	13.439	13.456	13.464	
	BETABAR	7.872	9.808	11.404	12.341	11.955	9.718	5.702	
	EPSILON	-0.000	-0.879	-2.547	-4.135	-5.733	-7.282	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	396.130	396.248	396.500	397.278	394.964	392.007	390.315	
	VZ-BAR	392.397	390.448	388.671	388.098	386.397	386.366	388.304	
	V-THET-BAR	54.251	67.495	78.396	84.910	81.615	66.172	38.782	
	MACH-BAR	0.359	0.359	0.360	0.360	0.358	0.355	0.354	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.2	-4.0	-3.7	-4.2	-5.9	-9.5	-14.2	
	OMEGABAR	0.044	0.041	0.030	0.010	0.009	0.011	0.013	
	TURNING	-7.9	-9.8	-11.4	-12.3	-12.0	-9.7	-5.7	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.653	14.656	14.667	14.685	14.686	14.684	14.683	14.676
WCOR= 3.080	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34072.0	P-STATIC	12.612	12.620	12.640	12.621	12.628	12.634	12.630	
	BETABAR	6.086	7.664	8.990	9.797	9.529	7.755	4.563	
	EPSILON	-1.170	-1.148	-2.769	-4.690	-6.574	-7.348	-8.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	511.342	510.537	511.817	513.821	512.951	511.914	512.238	
	VZ-BAR	508.440	505.969	505.528	506.328	505.873	507.220	510.615	
	V-THET-BAR	54.207	68.086	79.979	87.431	84.920	69.073	40.752	
	MACH-BAR	0.468	0.467	0.468	0.470	0.469	0.468	0.469	
	U-WHEEL	746.608	768.832	813.283	857.735	902.186	946.637	968.863	
	V-BAR-PR	859.049	864.320	890.674	921.814	961.166	1013.609	1059.300	
	BETABAR-PR	53.710	54.169	55.418	56.682	58.242	59.971	61.186	
	V-THET-R-P	-692.401	-700.743	-733.303	-770.303	-817.266	-877.564	-928.111	
	MACH-BAR-P	0.786	0.791	0.815	0.843	0.879	0.927	0.969	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.984	21.674	22.625	22.681	22.279	21.634	21.248	22.215
ROTOR	T-TOTAL	590.54	589.86	590.95	587.02	590.69	596.56	600.65	590.87
	P-STATIC	15.869	16.071	16.497	16.866	17.154	17.424	17.556	
PR = 1.5136	BETABAR	72.028	55.767	52.561	49.418	53.215	59.807	64.238	
TR = 1.1391	EPSILON	-2.885	-1.688	-2.500	-4.280	-6.024	-6.673	-6.416	
EFF-A = 0.9063	K-BAR	0.985	0.985	0.985	0.985	0.984	0.985	0.985	
EFF-P = 0.9092	V-BAR	672.536	761.576	782.704	756.490	714.648	655.473	618.808	
	VZ-BAR	207.515	428.570	475.794	492.123	427.960	329.736	268.956	
	V-THET-BAR	639.716	629.220	621.463	574.536	572.282	566.378	557.302	
	MACH-BAR	0.583	0.668	0.687	0.664	0.623	0.565	0.529	
	U-WHEEL	737.837	759.480	802.772	846.064	889.356	932.648	954.293	
	V-BAR-PR	229.544	447.928	509.231	562.094	542.704	493.096	479.521	
	BETABAR-PR	45.308	16.911	20.849	28.886	36.545	48.019	55.883	
	V-THET-R-P	-98.120	-130.260	-181.310	-271.528	-317.074	-366.270	-396.992	
	MACH-BAR-P	0.199	0.393	0.447	0.494	0.464	0.425	0.410	
	D-FACTOR	0.970	0.714	0.657	0.601	0.659	0.731	0.764	
	TURNING	28.4	37.3	34.6	27.8	21.7	12.0	5.3	
	INCID-M	-3.7	-2.0	0.1	1.1	1.4	1.3	1.4	
	DEVIATION	37.2	20.7	12.2	11.2	11.4	16.8	22.0	
	OMEGABAR-P	0.397	0.188	0.064	-0.004	0.091	0.220	0.292	
	LOSS PAR	0.126	0.058	0.043	-0.001	0.031	0.065	0.073	
	PT-RATIO	1.364	1.479	1.543	1.544	1.517	1.473	1.447	1.5136
	EFF-AD	0.670	0.862	0.947	1.004	0.911	0.780	0.705	0.9063
	EFF-POLY	0.683	0.870	0.950	1.004	0.916	0.792	0.720	0.9092
STATOR LEADING EDGE	DIAMETER	4.956	5.096	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.984	21.644	22.616	22.687	22.299	21.649	21.248	22.215
	T-TOTAL	590.54	589.85	591.04	587.08	590.51	596.41	600.65	590.87
	P-STATIC	15.887	16.053	16.393	16.738	17.005	17.255	17.386	
	BETABAR	72.705	55.933	52.183	48.903	52.202	58.238	62.304	
	EPSILON	-0.113	-1.064	-2.710	-4.053	-4.770	-6.458	-7.979	
	K-BAR	0.985	0.985	0.985	0.985	0.985	0.985	0.985	
	V-BAR	670.961	761.230	789.722	766.144	727.018	670.546	633.962	
	VZ-BAR	199.473	426.558	484.195	503.613	445.591	353.035	294.657	
	V-THET-BAR	640.620	630.137	623.849	577.363	574.425	570.001	561.324	
	MACH-BAR	0.582	0.667	0.694	0.674	0.634	0.579	0.543	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	19.117	20.935	21.909	21.702	21.354	21.057	20.604	21.400
ROTOR PLUS STATOR	T-TOTAL	590.54	589.83	591.08	587.16	589.95	595.74	600.65	590.87
	P-STATIC	18.740	18.754	18.761	18.732	18.692	18.650	18.623	
PR = 1.4581	BETABAR	19.167	15.976	14.223	13.734	14.158	14.746	15.138	
TR = 1.1391	EPSILON	0.450	-0.243	-1.450	-2.332	-2.990	-4.210	-5.489	
EFF-A = 0.8178	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8272	V-BAR	200.655	466.966	554.803	539.011	514.272	493.943	483.217	
	VZ-BAR	189.533	448.968	537.796	523.601	498.651	477.676	467.491	
	V-THET-BAR	65.877	126.374	136.312	127.966	125.789	125.720	118.354	
1GV,ROTOR,STATOR	MACH-BAR	0.169	0.399	0.476	0.463	0.440	0.420	0.383	
	EFF-POLY	0.788	0.823	0.807	0.714	0.702	0.764	0.690	
PR = 1.4563	INCID-M	17.0	3.3	1.4	-1.6	0.7	4.6	7.5	
TR = 1.1391	DEVIATION	18.4	14.7	13.3	13.4	14.8	16.7	18.1	
EFF-A = 0.8171	OMEGA-BAR	0.212	0.127	0.114	0.166	0.179	0.135	0.167	
EFF-P = 0.8246	LOSS PAR	0.071	0.044	0.042	0.064	0.072	0.056	0.071	
	D-FACTOR	1.005	0.626	0.534	0.533	0.553	0.558	0.599	
	TURNING	53.5	40.0	38.0	35.2	38.0	43.5	47.2	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 45)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.019	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29034.0	P-STATIC	13.816	13.816	13.821	13.831	13.845	13.864	13.875	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.598	-4.225	-5.784	-7.315	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	329.922	329.778	328.842	326.989	324.205	320.508	318.291	
	VZ-BAR	329.922	329.778	328.842	326.989	324.205	320.508	318.291	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.001	0.000	
	MACH-BAR	0.298	0.298	0.297	0.295	0.293	0.289	0.287	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.655	14.658	14.668	14.686	14.687	14.686	14.684	14.678
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.460	13.462	13.470	13.482	13.495	13.511	13.519	
	BETABAR	7.455	9.825	11.682	12.154	11.975	9.880	5.649	
	EPSILON	-0.000	-0.904	-2.566	-4.186	-5.757	-7.313	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	386.863	386.984	387.245	387.997	385.865	383.023	381.400	
	VZ-BAR	383.593	381.295	379.224	379.300	377.469	377.327	379.548	
	V-THET-BAR	50.194	66.033	78.407	81.688	80.058	65.720	37.584	
	MACH-BAR	0.351	0.351	0.351	0.352	0.350	0.347	0.346	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.6	-3.9	-3.5	-4.4	-5.9	-9.4	-18.3	
	OMEGABAR	0.045	0.042	0.030	0.009	0.008	0.010	0.012	
	TURNING	-7.5	-9.8	-11.7	-12.2	-12.0	-9.9	-5.6	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.655	14.658	14.669	14.686	14.687	14.686	14.684	14.678
WCOR= 3.023	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29034.0	P-STATIC	12.707	12.715	12.724	12.729	12.732	12.733	12.730	
	BETABAR	5.770	7.697	9.243	9.696	9.586	7.903	4.533	
	EPSILON	-1.170	-1.788	-3.088	-4.812	-5.661	-6.495	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	498.902	498.125	498.165	499.596	499.197	498.921	499.167	
	VZ-BAR	496.375	493.626	491.696	492.459	492.227	494.170	497.606	
	V-THET-BAR	50.154	66.715	80.018	84.144	83.132	68.601	39.451	
	MACH-BAR	0.456	0.455	0.455	0.457	0.456	0.456	0.456	
	U-WHEEL	636.212	655.149	693.028	730.907	768.786	806.664	825.604	
	V-BAR-PR	768.018	768.065	785.845	812.912	848.047	888.231	930.402	
	BETABAR-PR	49.736	50.007	51.266	52.713	54.325	56.194	57.668	
	V-THET-B-P	-586.058	-588.435	-613.010	-646.763	-685.654	-738.063	-786.153	
	MACH-BAR-P	0.702	0.702	0.718	0.743	0.771	0.812	0.850	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.249	19.500	19.811	19.800	19.725	19.305	18.985	19.620
ROTOR	T-TOTAL	567.46	567.00	568.25	566.52	568.52	570.78	572.23	568.28
------	P-STATIC	14.553	14.650	14.884	15.120	15.328	15.524	15.619	
PR = 1.3367	BETABAR	45.544	44.883	44.874	42.946	44.061	45.850	45.474	
TR = 1.0956	EPSILON	-2.886	-2.626	-3.114	-4.340	-5.483	-6.302	-6.418	
EFF-A = 0.9065	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
EFF-P = 0.9083	V-BAR	723.509	731.029	731.859	710.358	689.135	643.494	610.649	
	VZ-BAR	506.717	517.972	518.632	519.978	495.215	448.221	428.209	
	V-THET-BAR	516.433	515.856	516.368	483.974	479.233	461.717	435.350	
	MACH-BAR	0.645	0.652	0.652	0.633	0.611	0.567	0.535	
	U-WHEEL	628.738	647.181	684.072	720.962	757.853	794.744	813.188	
	V-BAR-PR	519.013	534.371	545.116	571.476	568.236	558.416	571.073	
	BETABAR-PR	12.497	14.225	17.916	24.500	29.365	36.612	41.424	
	V-THET-B-P	-112.305	-131.325	-167.704	-236.988	-278.620	-333.026	-377.839	
	MACH-BAR-P	0.463	0.477	0.486	0.509	0.508	0.492	0.501	
	D-FACTOR	0.535	0.513	0.516	0.492	0.523	0.565	0.575	
	TURNING	37.2	35.8	33.4	28.2	25.0	19.6	16.2	
	INCID-R	-7.7	-6.1	-4.0	-2.8	-2.6	-2.4	-2.1	
	DEVIATION	24.4	18.0	9.3	6.8	4.2	5.4	7.6	
	OMEGABAR-P	0.145	0.091	0.063	0.031	0.077	0.166	0.218	
	LOSS PAR	0.050	0.032	0.023	0.011	0.028	0.059	0.073	
	PT-RATIO	1.313	1.330	1.351	1.348	1.343	1.315	1.293	1.3367
	EFF-AD	0.862	0.913	0.939	0.967	0.916	0.840	0.738	0.9065
	FFF-POLY	0.867	0.916	0.941	0.968	0.919	0.817	0.747	0.9083
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.249	19.495	19.808	19.801	19.730	19.310	18.985	19.620
	T-TOTAL	567.46	567.00	568.26	566.52	568.46	570.76	572.23	568.28
	P-STATIC	14.618	14.647	14.777	14.986	15.133	15.330	15.425	
	BETABAR	46.080	44.973	44.393	42.111	42.996	44.660	44.175	
	EPSILON	-0.113	-0.888	-2.615	-3.865	-5.206	-6.979	-7.979	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	717.976	730.981	740.433	724.909	706.026	661.462	629.246	
	VZ-BAR	498.029	517.133	529.079	537.765	516.390	470.498	451.304	
	V-THET-BAR	517.162	516.625	517.986	486.107	481.463	464.934	438.492	
	MACH-BAR	0.639	0.652	0.661	0.647	0.627	0.584	0.553	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.000	18.698	19.457	19.490	19.335	18.684	18.132	19.128
ROTOR PLUS STATOR	T-TOTAL	567.46	566.99	568.27	566.53	568.45	570.78	572.23	568.28
----------	P-STATIC	16.367	16.379	16.383	16.354	16.307	16.242	16.206	
PR = 1.3032	BETABAR	16.932	15.360	12.672	12.749	12.772	12.108	10.659	
TR = 1.0956	EPSILON	0.450	0.048	-1.225	-2.537	-3.691	-4.958	-5.489	
EFF-A = 0.8223	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8289	V-BAR	427.530	502.476	572.078	576.771	569.575	518.564	465.924	
	VZ-BAR	408.997	484.549	558.143	563.854	555.482	507.026	457.885	
	V-THET-BAR	124.512	132.964	125.486	121.381	125.914	108.777	86.177	
IGV,ROTOR,STATOR	MACH-BAR	0.371	0.439	0.502	0.507	0.499	0.452	0.404	
----------	EFF-POLY	0.626	0.727	0.850	0.849	0.786	0.635	0.517	
PR = 1.3017	INCID-R	-9.6	-7.7	-6.4	-8.4	-8.5	-9.0	-10.6	
TR = 1.0956	DEVIATION	16.2	14.1	11.8	11.8	13.4	14.1	13.6	
EFF-A = 0.8206	OMEGA-BAR	0.270	0.164	0.070	0.064	0.086	0.157	0.240	
EFF-P = 0.8253	LOSS PAR	0.092	0.058	0.026	0.025	0.035	0.067	0.104	
	D-FACTOR	0.598	0.503	0.431	0.407	0.406	0.453	0.511	
	TURNING	29.1	29.6	31.7	30.0	30.2	32.6	33.5	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 46)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.939	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=28988.0	P-STATIC	13.847	13.847	13.852	13.861	13.875	13.893	13.904	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.594	-4.225	-5.784	-7.315	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	323.904	323.753	322.844	321.024	318.294	314.671	312.496	
	VZ-BAR	323.904	323.753	322.844	321.024	318.294	314.671	312.496	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.001	0.000	
	MACH-BAR	0.293	0.292	0.292	0.290	0.287	0.284	0.282	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.658	14.660	14.670	14.687	14.689	14.687	14.686	14.680
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.531	13.532	13.540	13.552	13.565	13.579	13.587	
	BETABAR	7.788	9.987	11.872	12.151	12.121	9.919	5.417	
	EPSILON	-0.000	-0.904	-2.566	-4.186	-5.757	-7.313	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	375.281	375.370	375.659	376.375	374.370	371.635	370.057	
	VZ-BAR	371.819	369.670	367.623	367.943	366.023	366.063	368.404	
	V-THET-BAR	50.854	65.096	77.284	79.222	78.609	64.014	34.937	
	MACH-BAR	0.340	0.340	0.340	0.341	0.339	0.337	0.335	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.3	-3.8	-3.3	-4.4	-5.8	-9.3	-14.5	
	OMEGABAR	0.043	0.040	0.029	0.008	0.007	0.009	0.011	
	TURNING	-7.8	-10.0	-11.9	-12.2	-12.1	-9.9	-5.4	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.658	14.660	14.671	14.688	14.689	14.687	14.686	14.680
WCOR= 2.982	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=28988.0	P-STATIC	12.830	12.837	12.846	12.850	12.854	12.855	12.852	
	BETABAR	6.046	7.847	9.422	9.728	9.736	7.959	4.361	
	EPSILON	-1.170	-1.771	-3.004	-4.396	-5.677	-6.495	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	482.417	481.629	481.691	483.152	482.779	482.518	482.757	
	VZ-BAR	479.733	477.110	475.192	476.209	475.826	477.856	481.360	
	V-THET-BAR	50.813	65.751	78.858	81.608	81.638	66.809	36.711	
	MACH-BAR	0.440	0.440	0.440	0.441	0.441	0.440	0.441	
	U-WHEEL	635.204	654.112	691.930	729.749	767.568	805.386	824.296	
	V-BAR-PR	756.080	757.499	775.674	804.281	834.816	879.691	923.036	
	BETABAR-PR	50.617	50.961	52.220	53.693	55.250	57.096	58.567	
	V-THET-R-P	-584.391	-588.360	-613.071	-648.141	-685.930	-738.577	-787.584	
	MACH-BAR-P	0.690	0.691	0.708	0.734	0.762	0.803	0.842	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.381	19.459	19.896	19.890	19.798	19.397	19.190	19.689
ROTOR	T-TOTAL	567.61	567.48	568.33	566.59	568.86	571.16	572.07	568.53
	P-STATIC	14.830	14.931	15.183	15.417	15.624	15.823	15.923	
PR = 1.3412	BETABAR	47.132	47.529	46.458	44.283	46.027	48.080	46.315	
TR = 1.0961	EPSILON	-2.886	-2.610	-3.185	-4.309	-5.509	-6.297	-6.418	
EFF-A = 0.9130	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.9145	V-BAR	708.481	704.905	712.445	691.245	668.560	622.733	597.409	
	VZ-BAR	481.990	475.960	490.783	494.865	464.195	416.041	412.628	
	V-THET-BAR	519.260	519.955	516.426	482.626	481.128	463.365	432.013	
	MACH-BAR	0.630	0.627	0.634	0.614	0.591	0.547	0.523	
	U-WHEEL	627.742	646.156	682.988	719.820	756.652	793.485	811.900	
	V-BAR-PR	494.087	492.421	518.320	548.812	539.831	531.118	560.870	
	BETABAR-PR	12.684	14.850	18.740	25.607	30.693	38.430	42.634	
	V-THET-R-P	-108.481	-126.201	-166.562	-237.194	-275.524	-330.119	-379.887	
	MACH-BAR-P	0.439	0.438	0.461	0.488	0.478	0.467	0.491	
	D-FACTOR	0.562	0.564	0.544	0.516	0.553	0.594	0.583	
	TURNING	37.9	36.1	33.5	28.1	24.6	18.7	15.9	
	INCID-M	-6.8	-5.2	-3.1	-1.9	-1.6	-1.5	-1.2	
	DEVIATION	24.5	18.6	10.1	7.9	5.5	7.2	8.8	
	OMEGABAR-P	0.129	0.112	0.052	0.019	0.074	0.163	0.193	
	LOSS PAR	0.044	0.039	0.019	0.007	0.027	0.056	0.068	
	PT-RATIO	1.322	1.327	1.356	1.354	1.348	1.321	1.307	1.3412
	EFF-AD	0.882	0.897	0.951	0.981	0.921	0.818	0.772	0.9130
	EFF-POLY	0.886	0.900	0.953	0.981	0.924	0.825	0.780	0.9145
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.381	19.456	19.891	19.892	19.803	19.400	19.190	19.689
	T-TOTAL	567.61	567.48	568.35	566.59	568.79	571.15	572.07	568.53
	P-STATIC	14.894	14.936	15.086	15.266	15.448	15.645	15.736	
	BETABAR	47.701	47.681	46.011	43.505	44.949	46.853	44.987	
	EPSILON	-0.113	-0.926	-2.453	-3.856	-5.033	-6.966	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	703.031	704.254	720.202	704.083	684.101	639.571	615.508	
	VZ-BAR	473.138	474.142	500.182	510.680	484.166	437.386	435.329	
	V-THET-BAR	519.994	520.732	518.158	484.704	483.286	466.632	435.132	
	MACH-BAR	0.625	0.626	0.641	0.627	0.606	0.563	0.540	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.323	18.814	19.535	19.580	19.398	18.874	18.485	19.240
ROTOR PLUS STATOR	T-TOTAL	567.61	567.46	568.37	566.59	568.77	571.14	572.07	568.53
	P-STATIC	16.679	16.688	16.692	16.665	16.621	16.563	16.529	
PR = 1.3107	BETABAR	16.598	15.302	12.952	12.208	12.958	12.401	11.227	
TR = 1.0961	EPSILON	0.450	0.001	-1.272	-2.504	-3.674	-4.901	-5.489	
EFF-A = 0.8366	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8427	V-BAR	425.074	478.889	547.806	553.526	543.217	501.339	464.916	
	VZ-BAR	407.364	461.925	533.869	541.008	529.385	489.640	456.019	
	V-THET-BAR	121.421	126.293	122.772	117.052	121.802	107.668	90.517	
IGV,ROTOR,STATOR	MACH-BAR	0.369	0.417	0.479	0.485	0.475	0.436	0.403	
	EFF-POLY	0.668	0.767	0.846	0.846	0.779	0.673	0.567	
PR = 1.3093	INCID-M	-8.0	-5.0	-4.8	-7.0	-6.6	-6.8	-9.8	
TR = 1.0961	DEVIATION	15.8	14.0	12.1	11.8	13.6	14.4	14.2	
EFF-A = 0.8353	OMEGA-BAR	0.236	0.142	0.074	0.067	0.093	0.140	0.204	
EFF-P = 0.8396	LOSS PAR	0.080	0.050	0.027	0.026	0.038	0.059	0.088	
	D-FACTOR	0.596	0.523	0.450	0.424	0.429	0.463	0.496	
	TURNING	31.1	32.4	33.1	31.3	32.0	34.5	33.8	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 47)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.880	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29169.0	P-STATIC	13.882	13.883	13.888	13.897	13.910	13.927	13.938	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.908	-2.620	-4.238	-5.790	-7.292	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	316.862	316.723	315.816	314.029	311.336	307.791	305.643	
	VZ-BAR	316.862	316.723	315.816	314.029	311.336	307.791	305.643	
	V-THET-BAR	0.000	0.001	0.000	0.001	0.001	0.001	0.000	
	MACH-BAR	0.286	0.286	0.285	0.283	0.281	0.278	0.276	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.660	14.662	14.672	14.688	14.689	14.688	14.687	14.681
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.606	13.609	13.616	13.626	13.638	13.652	13.659	
	BETABAR	8.642	10.113	11.691	12.178	12.030	10.020	6.519	
	EPSILON	-0.000	-0.899	-2.564	-4.183	-5.747	-7.288	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	362.404	362.375	362.696	363.554	361.629	359.101	357.629	
	VZ-BAR	358.289	356.740	355.172	355.373	353.688	353.613	355.316	
	V-THET-BAR	54.457	63.625	73.493	76.693	75.371	62.480	40.602	
	MACH-BAR	0.328	0.328	0.328	0.329	0.327	0.325	0.324	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.4	-3.7	-3.4	-4.3	-5.9	-9.2	-13.4	
	OMEGABAR	0.043	0.040	0.028	0.008	0.006	0.008	0.010	
	TURNING	-8.6	-10.1	-11.7	-12.2	-12.0	-10.0	-6.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.660	14.662	14.672	14.688	14.689	14.688	14.687	14.681
WCOR= 2.883	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29169.0	P-STATIC	12.959	12.967	12.974	12.978	12.982	12.983	12.980	
	BETABAR	6.729	7.958	9.301	9.772	9.690	8.075	5.266	
	EPSILON	-1.170	-1.709	-3.025	-4.522	-5.852	-6.622	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	468.403	463.620	463.906	465.320	464.897	464.616	468.847	
	VZ-BAR	461.205	459.151	457.807	458.570	458.265	460.001	462.885	
	V-THET-BAR	54.413	64.183	74.975	78.975	78.247	65.258	42.665	
	MACH-BAR	0.423	0.422	0.423	0.424	0.424	0.423	0.424	
	U-WHEEL	639.170	658.196	696.250	734.305	772.360	810.415	829.443	
	V-BAR-PR	744.749	750.782	771.735	799.844	831.749	875.710	912.843	
	BETABAR-PR	51.737	52.297	53.613	55.017	56.566	58.311	59.530	
	V-THET-R-P	-584.757	-594.013	-621.275	-655.330	-694.113	-745.157	-786.778	
	MACH-BAR-P	0.679	0.684	0.703	0.729	0.758	0.798	0.832	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.411	19.556	20.016	19.905	19.873	19.540	19.264	19.778
ROTOR	T-TOTAL	567.87	567.78	567.62	566.04	568.87	572.20	572.28	568.49
-----	P-STATIC	15.111	15.218	15.462	15.687	15.889	16.087	16.183	
PR = 1.3472	BETABAR	49.581	48.978	46.333	45.017	46.924	50.023	49.152	
TR = 1.0960	EPSILON	-2.885	-2.469	-3.102	-4.326	-5.554	-6.358	-6.418	
EFF-A = 0.9287	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.9290	V-BAR	686.310	686.720	696.315	668.779	650.516	609.565	577.912	
	VZ-BAR	444.981	450.730	480.772	472.761	444.279	391.630	377.989	
	V-THET-BAR	522.506	518.092	503.685	473.035	475.163	467.114	437.157	
	MACH-BAR	0.609	0.609	0.619	0.593	0.574	0.534	0.505	
	U-WHEEL	631.661	650.190	687.252	724.314	761.377	798.439	816.969	
	V-BAR-PR	458.174	469.713	514.671	535.430	528.501	512.986	535.848	
	BETABAR-PR	13.783	16.329	20.891	27.990	32.792	40.237	45.138	
	V-THET-R-P	-109.156	-132.098	-183.567	-251.280	-286.213	-331.324	-379.813	
	MACH-BAR-P	0.406	0.417	0.457	0.475	0.467	0.450	0.468	
	D-FACTOR	0.603	0.590	0.542	0.527	0.564	0.616	0.605	
	TURNING	38.0	36.0	32.7	27.0	23.8	18.1	14.4	
	INCID-M	-5.7	-3.8	-1.7	-0.5	-0.3	-0.3	-0.2	
	DEVIATION	25.6	20.1	12.3	10.3	7.6	9.0	11.3	
	OMEGABAR-P	0.133	0.103	0.017	0.006	0.064	0.162	0.190	
	LOSS PAR	0.045	0.036	0.006	0.002	0.022	0.054	0.060	
	PT-RATIO	1.324	1.334	1.364	1.355	1.353	1.330	1.312	1.3472
	EFF-AD	0.882	0.907	0.984	0.994	0.933	0.824	0.781	0.9287
	EFF-POLI	0.886	0.910	0.984	0.994	0.935	0.831	0.788	0.9290
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.411	19.551	20.012	19.908	19.875	19.545	19.264	19.778
	T-TOTAL	567.87	567.78	567.66	566.04	568.77	572.18	572.28	568.49
	P-STATIC	15.145	15.206	15.371	15.589	15.735	15.934	16.027	
	BETABAR	49.973	49.020	45.914	44.244	45.920	48.900	47.914	
	EPSILON	-0.113	-0.947	-2.385	-3.988	-5.332	-6.903	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	683.321	687.453	703.706	680.821	664.170	624.224	593.304	
	VZ-BAR	439.480	450.831	489.583	487.727	462.044	410.347	397.661	
	V-THET-BAR	523.244	518.967	505.462	475.016	477.102	470.394	440.312	
	MACH-BAR	0.606	0.610	0.626	0.605	0.587	0.548	0.519	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	18.456	18.988	19.651	19.636	19.446	18.919	18.603	19.328
ROTOR PLUS STATOR	T-TOTAL	567.87	567.78	567.69	566.03	568.68	572.17	572.28	568.49
----------	P-STATIC	16.993	16.999	16.995	16.969	16.931	16.884	16.859	
PR = 1.3165	BETABAR	17.302	15.738	13.000	12.296	13.235	13.326	12.382	
TR = 1.0960	EPSILON	0.450	-0.038	-1.280	-2.431	-3.549	-4.838	-5.489	
EFF-A = 0.8515	K-BAR	0.925	0.925	0.925	0.925	0.925	0.925	0.925	
EFF-P = 0.8572	V-BAR	398.893	460.450	526.448	527.023	514.891	468.864	436.646	
	VZ-BAR	380.884	443.208	512.955	510.934	501.217	456.240	426.489	
	V-THET-BAR	118.631	124.772	118.410	112.233	117.874	108.069	93.629	
IGV,ROTOR,STATOR	MACH-BAR	0.345	0.400	0.460	0.461	0.449	0.406	0.378	
----------	EFF-POLI	0.694	0.791	0.844	0.863	0.774	0.640	0.591	
PR = 1.3153	INCID-M	-5.7	-3.6	-4.9	-6.3	-5.6	-4.7	-6.9	
TR = 1.0960	DEVIATION	16.5	14.4	12.1	11.9	13.9	15.3	15.3	
EFF-A = 0.8517	OMEGA-BAR	0.224	0.130	0.078	0.062	0.104	0.173	0.204	
EFF-P = 0.8543	LOSS PAR	0.076	0.045	0.029	0.024	0.042	0.073	0.088	
	D-FACTOR	0.626	0.538	0.463	0.441	0.453	0.505	0.527	
	TURNING	32.7	33.3	32.9	31.9	32.7	35.6	35.5	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 48)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.790	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29088.0	P-STATIC	13.936	13.936	13.941	13.949	13.961	13.977	13.987	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.623	-4.224	-5.782	-7.295	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	306.057	305.917	305.054	303.387	300.853	297.455	295.402	
	VZ-BAR	306.057	305.917	305.054	303.387	300.853	297.455	295.402	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.276	0.276	0.275	0.274	0.271	0.268	0.266	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.662	14.664	14.673	14.689	14.690	14.690	14.688	14.682
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.657	13.659	13.666	13.676	13.687	13.700	13.707	
	BETABAR	7.723	9.707	11.687	12.331	12.087	9.886	5.786	
	EPSILON	-0.000	-0.910	-2.561	-4.159	-5.729	-7.291	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	353.670	353.725	354.148	354.923	353.053	350.565	349.073	
	VZ-BAR	350.462	348.651	346.805	346.734	345.226	345.345	347.295	
	V-THET-BAR	47.530	59.643	71.736	75.799	73.929	60.190	35.194	
	MACH-BAR	0.320	0.320	0.320	0.321	0.319	0.317	0.316	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.4	-4.1	-3.5	-4.2	-5.8	-9.4	-14.1	
	OMEGABAR	0.043	0.040	0.028	0.008	0.006	0.007	0.009	
	TURNING	-7.7	-9.7	-11.7	-12.3	-12.1	-9.9	-5.8	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.662	14.664	14.674	14.689	14.690	14.690	14.688	14.682
WCOR= 2.792	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29088.0	P-STATIC	13.043	13.049	13.056	13.062	13.067	13.069	13.067	
	BETABAR	6.022	7.652	9.317	9.913	9.759	7.983	4.687	
	EPSILON	-1.170	-1.749	-3.190	-4.718	-6.039	-6.654	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	452.691	451.980	452.238	453.425	452.798	452.416	452.595	
	VZ-BAR	450.192	447.948	446.271	446.656	446.246	448.020	451.082	
	V-THET-BAR	47.492	60.182	73.213	78.059	76.751	62.832	36.981	
	MACH-BAR	0.412	0.412	0.412	0.413	0.412	0.412	0.412	
	U-WHEEL	637.396	656.368	694.317	732.266	770.216	808.165	827.139	
	V-BAR-PR	742.064	745.719	764.809	792.145	824.642	869.628	909.849	
	BETABAR-PR	52.650	53.080	54.302	55.676	57.238	58.988	60.279	
	V-THET-B-P	-589.903	-596.187	-621.104	-654.207	-693.464	-745.333	-790.158	
	MACH-BAR-P	0.676	0.679	0.696	0.721	0.751	0.792	0.828	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.381	19.737	20.137	19.930	19.744	19.473	19.293	19.799
ROTOR	T-TOTAL	568.50	567.99	568.27	565.87	568.37	571.12	572.90	568.34
PR = 1.3485	P-STATIC	15.219	15.329	15.579	15.804	16.000	16.187	16.278	
TR = 1.0957	BETABAR	50.742	48.635	47.119	45.632	48.265	50.344	49.938	
EFF-A = 0.9344	EPSILON	-2.885	-2.532	-3.271	-4.582	-5.707	-6.456	-6.418	
EFF-P = 0.9348	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	675.131	689.486	694.702	660.229	630.910	594.022	571.067	
	VZ-BAR	427.229	455.631	472.718	461.673	419.992	379.090	367.548	
	V-THET-BAR	522.760	517.414	509.061	471.975	470.800	457.333	437.066	
	MACH-BAR	0.598	0.612	0.617	0.585	0.556	0.521	0.499	
	U-WHEEL	629.907	648.385	685.344	722.303	759.262	796.221	814.701	
	V-BAR-PR	440.460	474.094	504.566	525.214	509.515	508.489	526.972	
	BETABAR-PR	14.079	16.032	20.447	28.467	34.483	41.795	45.776	
	V-THET-B-P	-107.148	-130.972	-176.283	-250.328	-288.462	-338.888	-377.635	
	MACH-BAR-P	0.390	0.421	0.448	0.466	0.449	0.446	0.460	
	D-FACTOR	0.629	0.583	0.555	0.535	0.583	0.615	0.616	
	TURNING	38.6	37.0	33.9	27.2	22.8	17.2	14.5	
	INCID-R	-4.7	-3.0	-1.0	0.1	0.3	0.3	0.5	
	DEVIATION	25.9	19.8	11.8	10.8	9.3	10.6	11.9	
	OMEGABAR-P	0.154	0.076	0.010	-0.002	0.075	0.155	0.197	
	LOSS PAR	0.052	0.026	0.004	-0.001	0.026	0.051	0.062	
	PT-RATIO	1.322	1.346	1.372	1.357	1.344	1.326	1.314	1.3485
	EFF-AD	0.865	0.933	0.991	1.002	0.921	0.830	0.776	0.9344
	EFF-POLY	0.870	0.935	0.991	1.001	0.924	0.837	0.784	0.9348
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.381	19.730	20.135	19.937	19.749	19.475	19.293	19.799
	T-TOTAL	568.50	568.00	568.30	565.90	568.28	571.10	572.90	568.34
	P-STATIC	15.246	15.313	15.490	15.679	15.860	16.044	16.133	
	BETABAR	51.096	48.657	46.685	44.918	47.250	49.241	48.783	
	EPSILON	-0.113	-0.989	-2.657	-3.977	-5.359	-6.903	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	672.700	690.366	702.034	671.599	643.893	607.953	585.588	
	VZ-BAR	422.464	456.045	481.596	475.569	437.078	396.923	386.161	
	V-THET-BAR	523.498	518.262	510.791	474.215	472.814	460.499	440.220	
	MACH-BAR	0.596	0.613	0.624	0.596	0.568	0.533	0.512	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.588	19.125	19.713	19.531	19.306	18.929	18.705	19.315
ROTOR PLUS STATOR	T-TOTAL	568.50	568.00	568.32	565.92	568.18	571.06	572.90	568.34
	P-STATIC	17.060	17.070	17.072	17.044	17.003	16.955	16.929	
PR = 1.3155	BETABAR	17.210	15.892	13.498	12.407	12.885	13.010	12.069	
TR = 1.0957	EPSILON	0.450	-0.074	-1.265	-2.399	-3.461	-4.785	-5.489	
EFF-A = 0.8517	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8574	V-BAR	406.698	466.740	524.321	509.350	493.276	460.955	439.788	
	VZ-BAR	388.489	448.915	509.836	497.455	480.856	449.122	430.068	
	V-THET-BAR	120.332	127.723	122.376	109.436	109.993	103.774	91.953	
IGV,ROTOR,STATOR	MACH-BAR	0.352	0.406	0.458	0.445	0.430	0.400	0.380	
	EFF-POLY	0.728	0.776	0.818	0.800	0.758	0.661	0.608	
PR = 1.3184	INCID-R	-4.6	-4.0	-4.1	-5.6	-4.3	-4.4	-6.0	
TR = 1.0957	DEVIATION	16.4	14.6	12.6	12.0	13.5	15.0	15.0	
EFF-A = 0.8515	OMEGA-BAR	0.192	0.137	0.091	0.095	0.114	0.159	0.186	
EFF-P = 0.8547	LOSS PAR	0.065	0.048	0.034	0.037	0.046	0.067	0.080	
	D-FACTOR	0.608	0.529	0.465	0.461	0.471	0.500	0.516	
	TURNING	33.9	32.8	33.2	32.5	34.4	36.2	36.7	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 49)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.707	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29058.0	P-STATIC	13.983	13.984	13.987	13.995	14.006	14.022	14.031	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.611	-4.218	-5.766	-7.290	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	296.183	296.066	295.261	293.650	291.207	287.923	285.943	
	VZ-BAR	296.183	296.066	295.261	293.650	291.207	287.923	285.943	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.000	0.000	0.000	
	MACH-BAR	0.267	0.267	0.266	0.265	0.263	0.260	0.258	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.664	14.666	14.675	14.689	14.691	14.691	14.689	14.683
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.745	13.746	13.754	13.762	13.773	13.785	13.792	
	BETABAR	7.667	9.926	11.712	12.215	11.843	9.937	6.496	
	EPSILON	-0.000	-0.879	-2.542	-4.159	-5.710	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	337.992	337.997	338.360	339.140	337.356	335.014	333.560	
	VZ-BAR	334.971	332.927	331.314	331.462	330.175	329.979	331.418	
	V-THET-BAR	45.094	58.260	66.686	71.755	69.237	57.811	37.735	
	MACH-BAR	0.305	0.305	0.306	0.307	0.305	0.303	0.301	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.4	-3.6	-3.4	-4.3	-6.0	-9.3	-13.4	
	OMEGABAR	0.042	0.040	0.028	0.007	0.005	0.006	0.008	
	TURNING	-7.7	-9.9	-11.7	-12.2	-11.8	-9.9	-6.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.664	14.666	14.675	14.690	14.691	14.691	14.689	14.683
WCOR= 2.709	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29058.0	P-STATIC	13.188	13.194	13.200	13.206	13.214	13.218	13.218	
	BETABAR	5.994	7.846	9.356	9.846	9.598	8.065	5.265	
	EPSILON	-1.171	-1.731	-3.392	-5.145	-6.605	-7.618	-8.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	431.465	430.773	431.063	432.067	431.061	430.371	430.522	
	VZ-BAR	429.106	426.733	425.329	425.704	425.027	426.107	428.692	
	V-THET-BAR	45.658	58.799	70.075	73.860	71.873	60.378	39.652	
	MACH-BAR	0.392	0.392	0.392	0.393	0.392	0.391	0.391	
	U-WHEEL	636.738	655.691	693.601	731.511	769.421	807.331	826.286	
	V-BAR-PR	730.902	733.746	754.782	783.395	816.840	859.950	895.863	
	BETABAR-PR	54.049	54.458	55.700	57.083	58.645	60.296	61.411	
	V-THET-B-P	-591.680	-596.692	-623.526	-657.631	-697.549	-746.453	-786.634	
	MACH-BAR-P	0.664	0.667	0.686	0.712	0.743	0.782	0.814	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.264	19.898	20.199	19.855	19.680	19.300	19.234	19.769
ROTOR	T-TOTAL	569.27	568.66	568.72	568.55	568.03	572.17	574.10	568.57
	P-STATIC	15.211	15.333	15.591	15.697	15.979	16.153	16.242	
PR = 1.3477	BETABAR	52.243	48.319	47.011	45.332	47.586	52.367	51.941	
TR = 1.0961	EPSILON	-2.685	-2.520	-3.325	-4.878	-6.159	-6.627	-6.418	
EFF-A = 0.9288	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
EFF-P = 0.9268	V-BAR	668.078	700.089	697.981	654.604	627.901	583.780	570.302	
	VZ-BAR	409.066	465.562	475.918	460.187	423.516	356.468	351.577	
	V-THET-BAR	528.165	522.811	510.507	465.548	463.517	462.313	449.042	
	MACH-BAR	0.591	0.622	0.619	0.580	0.554	0.511	0.497	
	U-WHEEL	629.256	647.718	684.637	721.558	758.479	795.400	813.861	
	V-BAR-PR	421.370	482.033	506.797	526.614	516.162	487.908	506.655	
	BETABAR-PR	13.679	15.012	20.089	29.088	34.863	43.056	46.059	
	V-THET-B-P	-101.072	-124.905	-174.070	-256.010	-294.962	-333.687	-364.819	
	MACH-BAR-P	0.373	0.428	0.450	0.467	0.455	0.427	0.442	
	D-FACTOR	0.653	0.569	0.549	0.528	0.571	0.639	0.638	
	TURNING	40.2	39.4	35.6	28.0	23.8	17.2	15.4	
	INCID-M	-3.3	-1.7	0.4	1.5	1.8	1.7	1.6	
	DEVIATION	25.7	18.8	11.5	11.4	9.7	11.8	12.2	
	OMEGABAR-P	0.199	0.064	0.010	0.004	0.080	0.200	0.229	
	LOSS PAR	0.068	0.022	0.004	0.002	0.028	0.064	0.071	
	PT-RATIO	1.314	1.357	1.376	1.352	1.340	1.314	1.309	1.3477
	EFF-AD	0.832	0.946	0.991	0.996	0.917	0.787	0.750	0.9288
	EFF-POLY	0.838	0.947	0.991	0.995	0.919	0.795	0.759	0.9268
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.264	19.886	20.202	19.863	19.690	19.302	19.234	19.769
	T-TOTAL	569.27	568.69	568.75	565.57	567.93	572.12	574.10	568.57
	P-STATIC	15.244	15.316	15.499	15.690	15.857	16.021	16.109	
	BETABAR	52.678	48.375	46.544	44.673	46.671	51.226	50.795	
	EPSILON	-0.113	-1.115	-2.868	-4.172	-5.485	-6.746	-7.979	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	665.121	700.696	705.831	669.404	639.779	596.961	583.670	
	VZ-BAR	403.256	465.462	486.467	473.191	439.012	373.832	368.433	
	V-THET-BAR	526.932	523.691	512.363	467.616	465.354	465.415	452.262	
	MACH-BAR	0.588	0.622	0.627	0.590	0.565	0.523	0.510	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.634	19.205	19.731	19.446	19.180	18.756	18.761	19.261
ROTOR PLUS STATOR	T-TOTAL	569.27	568.69	568.79	565.68	567.67	571.97	574.10	568.57
	P-STATIC	17.140	17.150	17.151	17.122	17.084	17.042	17.021	
PR = 1.3116	BETABAR	16.487	16.214	13.516	11.443	12.985	12.743	11.057	
TR = 1.0961	EPSILON	0.450	-0.145	-1.199	-2.231	-3.161	-4.596	-5.489	
EFF-A = 0.8385	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8446	V-BAR	402.301	465.985	517.935	492.682	470.931	430.836	427.842	
	VZ-BAR	384.748	447.465	503.567	481.109	458.889	420.225	419.900	
	V-THET-BAR	117.536	130.045	121.041	106.159	105.816	95.033	82.056	
IGV,ROTOR,STATOR	MACH-BAR	0.348	0.405	0.452	0.430	0.410	0.373	0.369	
	EFF-POLY	0.779	0.762	0.609	0.798	0.750	0.689	0.661	
PR = 1.3108	INCID-M	-3.0	-4.3	-4.3	-5.8	-4.8	-2.4	-4.0	
TR = 1.0961	DEVIATION	16.2	14.9	12.6	12.1	13.6	14.7	14.0	
EFF-A = 0.8392	OMEGA-BAR	0.156	0.149	0.100	0.100	0.133	0.166	0.170	
EFF-P = 0.8422	LOSS PAR	0.053	0.052	0.037	0.039	0.054	0.070	0.074	
	D-FACTOR	0.614	0.539	0.479	0.480	0.501	0.552	0.552	
	TURNING	35.7	32.2	33.0	32.2	33.7	38.5	39.7	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 50)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.619	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29140.0	P-STATIC	14.631	14.632	14.635	14.642	14.653	14.667	14.675	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.611	-4.218	-5.766	-7.290	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	285.828	285.716	284.937	283.389	281.034	277.883	275.978	
	VZ-BAR	285.828	285.716	284.937	283.389	281.034	277.883	275.978	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.000	0.000	0.000	
	MACH-BAR	0.258	0.258	0.257	0.255	0.253	0.250	0.249	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.846	
	P-TOTAL	14.666	14.668	14.676	14.690	14.691	14.691	14.690	14.684
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.811	13.812	13.818	13.827	13.837	13.848	13.854	
	BETABAR	7.947	9.981	11.591	12.152	11.929	9.696	5.986	
	EPSILON	-0.000	-0.879	-2.542	-4.159	-5.710	-7.291	-8.116	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	325.786	325.776	326.139	326.420	325.230	322.968	321.604	
	VZ-BAR	322.659	320.857	319.488	319.595	318.207	316.344	319.853	
	V-THET-BAR	45.041	56.463	65.527	68.817	67.225	54.393	33.514	
	MACH-BAR	0.294	0.294	0.295	0.295	0.294	0.292	0.290	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.1	-3.8	-3.5	-4.4	-6.0	-9.5	-13.9	
	OMEGABAR	0.042	0.040	0.028	0.007	0.005	0.005	0.007	
	TURNING	-7.9	-10.0	-11.6	-12.2	-11.9	-9.7	-6.0	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.666	14.668	14.676	14.690	14.691	14.691	14.690	14.684
WCOR= 2.620	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29140.0	P-STATIC	13.296	13.302	13.307	13.313	13.321	13.326	13.324	
	BETABAR	6.226	7.904	9.277	9.816	9.689	7.889	4.880	
	EPSILON	-1.176	-1.631	-3.343	-5.251	-6.871	-7.333	-6.647	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	414.976	414.265	414.687	415.722	414.597	413.736	413.937	
	VZ-BAR	412.529	410.323	409.263	409.636	408.682	409.812	412.437	
	V-THET-BAR	45.005	56.965	66.850	70.877	69.778	56.788	35.216	
	MACH-BAR	0.377	0.376	0.377	0.378	0.376	0.376	0.376	
	U-WHEEL	636.535	657.542	695.538	733.576	771.593	809.610	828.618	
	V-BAR-PR	722.812	727.365	750.184	779.087	812.140	857.142	894.198	
	BETABAR-PR	55.199	55.658	56.937	58.278	59.766	61.436	62.533	
	V-THET-B-P	-593.530	-600.576	-628.768	-662.699	-701.814	-752.821	-793.402	
	MACH-BAR-P	0.656	0.660	0.681	0.708	0.737	0.778	0.812	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.102	19.905	20.473	20.097	19.867	19.289	19.146	19.945
ROTOR	T-TOTAL	570.05	569.85	570.50	567.61	569.56	573.14	575.34	570.05
PR = 1.3583	P-STATIC	15.331	15.460	15.738	15.975	16.161	16.332	16.421	
TR = 1.0990	BETABAR	55.606	50.171	47.758	46.704	46.963	55.101	56.176	
EFF-A = 0.9259	EPSILON	-2.885	-2.406	-3.239	-4.905	-6.393	-6.778	-6.418	
EFF-P = 0.9268	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	645.818	690.487	704.442	657.902	626.038	565.322	544.701	
	VZ-BAR	362.945	442.300	473.565	451.174	411.052	323.483	303.188	
	V-THET-BAR	534.182	530.128	521.510	478.828	472.139	463.588	452.521	
	MACH-BAR	0.569	0.612	0.625	0.582	0.551	0.493	0.473	
	U-WHEEL	631.033	649.544	686.569	723.594	760.620	797.645	816.157	
	V-BAR-PR	375.646	458.139	501.545	513.313	502.260	465.150	473.449	
	BETABAR-PR	14.941	15.103	19.214	28.480	35.071	45.924	50.180	
	V-THET-B-P	-96.851	-119.416	-165.059	-244.766	-288.480	-334.057	-363.636	
	MACH-BAR-P	0.331	0.406	0.445	0.454	0.442	0.406	0.412	
	D-FACTOR	0.716	0.603	0.560	0.551	0.592	0.668	0.678	
	TURNING	40.3	40.6	37.7	29.8	24.7	15.5	12.4	
	INCID-M	-2.2	-0.5	1.7	2.7	2.9	2.8	2.8	
	DEVIATION	26.8	18.8	10.6	10.8	9.9	14.7	16.3	
	OMEGABAR-P	0.253	0.092	0.001	0.007	0.080	0.218	0.262	
	LOSS PAR	0.066	0.032	0.000	0.032	0.028	0.067	0.075	
	PT-RATIO	1.302	1.357	1.395	1.368	1.352	1.313	1.303	1.3583
	EFF-AD	0.793	0.925	1.000	0.994	0.919	0.772	0.721	0.9259
	EFF-POLY	0.800	0.928	0.999	0.993	0.922	0.780	0.730	0.9268
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.102	19.895	20.473	20.102	19.882	19.295	19.146	19.945
	T-TOTAL	570.05	569.85	570.52	567.60	569.47	573.08	575.34	570.05
	P-STATIC	15.355	15.445	15.654	15.873	16.044	16.265	16.291	
	BETABAR	56.220	50.240	47.365	46.115	48.047	53.759	54.727	
	EPSILON	-0.113	-1.437	-3.086	-4.593	-5.205	-6.715	-7.979	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	643.587	691.050	711.260	667.102	637.670	578.672	558.285	
	VZ-BAR	357.837	442.037	461.750	462.444	426.317	342.134	322.396	
	V-THET-BAR	534.936	531.050	523.262	480.801	474.172	466.670	455.786	
	MACH-BAR	0.567	0.612	0.631	0.591	0.562	0.505	0.486	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.542	19.246	19.843	19.492	19.198	18.764	18.611	19.306
ROTOR PLUS STATOR	T-TOTAL	570.05	569.85	570.53	567.70	569.21	572.60	575.34	570.05
PR = 1.3148	P-STATIC	17.281	17.290	17.289	17.258	17.221	17.182	17.162	
TR = 1.0990	BETABAR	16.778	15.623	13.724	12.918	12.891	12.360	11.038	
EFF-A = 0.8215	EPSILON	0.450	-0.251	-1.333	-2.207	-3.071	-4.416	-5.489	
EFF-P = 0.8283	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	369.415	453.933	514.309	482.888	457.253	413.501	397.747	
	VZ-BAR	353.689	437.180	499.624	470.665	445.729	403.915	390.388	
	V-THET-BAR	106.638	122.162	122.012	107.957	102.010	88.515	76.154	
IGV,ROTOR,STATOR	MACH-BAR	0.319	0.394	0.448	0.421	0.397	0.357	0.342	
	EFF-POLY	0.796	0.772	0.759	0.726	0.678	0.690	0.647	
PR = 1.3138	INCID-M	0.6	-2.4	-3.5	-4.4	-3.5	0.1	-0.1	
TR = 1.0990	DEVIATION	16.0	14.3	12.8	12.6	13.5	14.3	14.0	
EFF-A = 0.8214	OMEGA-BAR	0.150	0.146	0.131	0.144	0.178	0.172	0.187	
EFF-P = 0.8261	LOSS PAR	0.051	0.051	0.048	0.056	0.072	0.073	0.081	
	D-FACTOR	0.662	0.559	0.493	0.503	0.530	0.575	0.593	
	TURNING	39.4	34.6	33.6	33.2	35.2	41.4	43.7	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 51)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.549	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29116.0	P-STATIC	14.068	14.068	14.072	14.078	14.088	14.101	14.109	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.596	-4.198	-5.764	-7.288	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	277.683	277.573	276.822	275.334	273.053	270.012	268.156	
	VZ-BAR	277.683	277.573	276.822	275.334	273.053	270.012	268.156	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.250	0.250	0.249	0.248	0.246	0.243	0.242	
IGV TRAILING EDGE	DIAMETER	5.016	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.668	14.669	14.677	14.690	14.691	14.691	14.690	14.685
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.860	13.862	13.867	13.876	13.885	13.896	13.902	
	BETABAR	8.341	9.984	11.565	12.036	11.910	9.676	6.076	
	EPSILON	-0.000	-0.879	-2.530	-4.136	-5.698	-7.282	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	316.297	316.275	316.590	317.360	315.714	313.549	312.245	
	VZ-BAR	312.952	311.480	310.162	310.381	308.918	309.077	310.488	
	V-THET-BAR	45.882	54.830	63.469	66.167	65.154	52.710	33.061	
	MACH-BAR	0.286	0.286	0.286	0.287	0.265	0.283	0.282	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.7	-3.6	-3.6	-4.5	-6.0	-9.6	-13.6	
	OMEGABAR	0.042	0.040	0.028	0.007	0.005	0.005	0.007	
	TURNING	-8.3	-10.0	-11.6	-12.0	-11.9	-9.7	-6.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.668	14.670	14.677	14.690	14.691	14.691	14.690	14.685
WCOR= 2.551	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29116.0	P-STATIC	13.379	13.364	13.388	13.393	13.401	13.407	13.405	
	BETABAR	6.547	7.918	9.270	9.736	9.668	7.891	4.968	
	EPSILON	-1.176	-1.480	-3.237	-5.340	-7.215	-7.776	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	402.113	401.415	401.986	403.056	401.890	401.891	401.168	
	VZ-BAR	399.491	397.584	396.736	397.251	396.156	397.088	399.661	
	V-THET-BAR	45.845	55.295	64.752	68.172	67.031	55.033	34.740	
	MACH-BAR	0.365	0.364	0.365	0.366	0.365	0.364	0.364	
	U-WHEEL	636.009	657.000	694.986	732.971	770.957	808.943	827.935	
	V-BAR-PR	714.318	721.197	744.714	774.449	807.227	852.095	888.193	
	BETABAR-PR	55.995	56.544	57.809	59.139	60.608	62.223	63.258	
	V-THET-B-P	-592.104	-601.705	-636.233	-664.799	-703.326	-753.909	-793.195	
	MACH-BAR-P	0.648	0.654	0.676	0.703	0.732	0.773	0.800	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.911	19.790	20.542	20.202	19.950	19.291	19.043	19.993
ROTOR	T-TOTAL	570.73	570.01	570.95	568.50	570.62	574.13	576.79	570.71
----	P-STATIC	15.422	15.552	15.841	16.082	16.266	16.437	16.525	
PR = 1.3615	BETABAR	60.449	51.766	48.363	47.493	50.184	57.614	61.978	
TR = 1.1003	EPSILON	-2.885	-2.118	-3.281	-4.904	-6.626	-6.893	-6.416	
EFF-A = 0.9217	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.9226	V-BAR	622.652	674.833	700.544	656.439	623.143	555.152	524.573	
	VZ-BAR	307.236	417.529	465.441	443.546	399.031	297.479	246.452	
	V-THET-BAR	541.916	529.925	523.569	483.920	478.590	468.542	463.075	
	MACH-BAR	0.548	0.597	0.621	0.580	0.548	0.484	0.455	
	U-WHEEL	630.513	649.009	686.004	722.998	759.993	796.988	815.485	
	V-BAR-PR	319.755	434.180	493.006	503.907	486.340	443.475	430.037	
	BETABAR-PR	16.086	15.913	19.235	28.326	35.260	47.860	55.034	
	V-THET-B-P	-86.596	-119.084	-162.435	-239.179	-281.403	-328.447	-352.416	
	MACH-BAR-P	0.261	0.384	0.437	0.445	0.429	0.386	0.373	
	D-FACTOR	0.794	0.633	0.571	0.565	0.612	0.696	0.730	
	TURNING	39.9	40.6	38.6	30.8	25.4	14.4	8.2	
	INCID-M	-1.4	0.4	2.5	3.6	3.7	3.6	3.5	
	DEVIATION	27.9	19.7	10.6	10.7	10.0	16.6	21.2	
	OMEGABAR-P	0.312	0.121	-0.001	0.008	0.088	0.235	0.361	
	LOSS PAR	0.105	0.042	-0.000	0.003	0.030	0.069	0.077	
	PT-RATIO	1.289	1.349	1.399	1.375	1.356	1.313	1.296	1.3615
	EFF-AD	0.751	0.903	1.001	0.993	0.913	0.758	0.688	0.9217
	EFF-POLY	0.759	0.907	1.001	0.993	0.916	0.766	0.698	0.9226
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.911	19.773	20.539	20.209	19.966	19.304	19.043	19.993
	T-TOTAL	570.73	570.01	570.96	568.48	570.52	574.04	576.79	570.71
	P-STATIC	15.430	15.538	15.762	15.985	16.159	16.324	16.412	
	BETABAR	60.716	51.905	47.995	46.908	49.300	56.186	60.330	
	EPSILON	-0.113	-1.418	-2.789	-4.433	-5.043	-6.591	-7.979	
	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
	V-BAR	622.184	674.936	706.841	665.257	634.005	567.765	536.747	
	VZ-BAR	304.314	416.507	473.010	454.489	413.451	316.062	265.718	
	V-THET-BAR	542.663	530.832	525.243	485.805	480.606	471.508	466.417	
	MACH-BAR	0.547	0.597	0.627	0.588	0.556	0.495	0.466	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.368	19.220	19.843	19.531	19.235	18.819	18.576	19.326
ROTOR PLUS STATOR	T-TOTAL	570.73	570.01	570.96	568.56	570.14	573.55	576.79	570.71
----------	P-STATIC	17.373	17.362	17.380	17.349	17.315	17.279	17.260	
PR = 1.3161	BETABAR	16.244	15.003	13.447	12.693	12.569	12.201	11.356	
TR = 1.1003	EPSILON	0.458	-0.422	-1.408	-2.082	-2.739	-4.149	-5.489	
EFF-A = 0.8141	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.8212	V-BAR	329.109	439.595	504.929	476.735	450.221	407.484	379.443	
	VZ-BAR	315.971	424.632	491.086	465.085	439.432	396.278	372.014	
	V-THET-BAR	92.061	113.697	117.417	104.752	97.971	86.125	74.716	
IGV,ROTOR,STATOR	MACH-BAR	0.283	0.381	0.439	0.415	0.390	0.351	0.326	
----------	EFF-POLY	0.802	0.797	0.738	0.702	0.663	0.716	0.669	
PR = 1.3152	INCID-M	5.1	-0.7	-2.8	-3.6	-2.2	2.6	5.5	
TR = 1.1003	DEVIATION	15.5	13.7	12.6	12.3	13.2	14.2	14.3	
EFF-A = 0.8143	OMEGA-BAR	0.156	0.131	0.146	0.161	0.192	0.163	0.177	
EFF-P = 0.8192	LOSS PAR	0.053	0.046	0.054	0.062	0.078	0.069	0.077	
	D-FACTOR	0.726	0.575	0.507	0.516	0.546	0.585	0.621	
	TURNING	44.5	36.9	34.5	34.2	36.7	44.0	49.0	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 52)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.016	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.474	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29129.0	P-STATIC	14.106	14.107	14.110	14.115	14.124	14.136	14.144	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.593	-4.197	-5.743	-7.288	-8.667	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	268.919	268.813	268.131	266.764	264.684	261.860	260.122	
	VZ-BAR	268.919	268.813	268.131	266.764	264.684	261.860	260.122	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.242	0.242	0.241	0.240	0.238	0.236	0.234	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.670	14.671	14.678	14.690	14.692	14.692	14.691	14.685
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.912	13.914	13.919	13.927	13.936	13.946	13.951	
	BETABAR	7.420	9.658	11.514	12.092	11.885	9.066	5.516	
	EPSILON	-0.000	-0.879	-2.529	-4.128	-5.698	-7.282	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	306.036	306.036	306.331	307.061	305.437	303.361	302.174	
	VZ-BAR	303.476	301.688	300.167	300.249	298.889	299.560	300.774	
	V-THET-BAR	39.468	51.342	61.144	64.323	62.904	47.800	29.048	
	MACH-BAR	0.276	0.276	0.276	0.277	0.276	0.274	0.273	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.7	-4.1	-3.6	-4.4	-6.0	-10.2	-14.4	
	OMEGABAR	0.042	0.040	0.028	0.007	0.005	0.005	0.006	
	TURNING	-7.4	-9.7	-11.5	-12.1	-11.9	-9.1	-5.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.676	14.671	14.678	14.690	14.692	14.692	14.691	14.685
WCOR= 2.476	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29129.0	P-STATIC	13.464	13.469	13.472	13.476	13.484	13.491	13.488	
	BETABAR	5.828	7.682	9.243	9.794	9.674	7.401	4.516	
	EPSILON	-1.170	-1.331	-3.187	-5.421	-7.431	-8.143	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	388.366	387.697	388.407	389.529	388.329	387.274	387.641	
	VZ-BAR	386.361	384.210	383.364	383.852	382.806	384.039	386.437	
	V-THET-BAR	39.436	51.821	62.385	66.259	65.257	49.886	30.523	
	MACH-BAR	0.352	0.351	0.352	0.353	0.352	0.351	0.351	
	U-WHEEL	638.294	657.293	695.296	733.299	771.301	809.304	826.305	
	V-BAR-PR	712.674	717.069	739.965	769.803	803.147	851.004	866.447	
	BETABAR-PR	57.171	57.602	58.795	60.081	61.533	63.173	64.155	
	V-THET-B-P	-598.857	-605.472	-632.910	-667.039	-706.044	-759.417	-797.781	
	MACH-BAR-P	0.646	0.650	0.671	0.698	0.728	0.771	0.804	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.691	19.650	20.590	20.341	20.023	19.323	18.882	20.042
ROTOR	T-TOTAL	571.45	570.54	571.91	570.10	572.54	575.88	578.35	572.02
-----	P-STATIC	15.469	15.627	15.927	16.178	16.371	16.546	16.633	
PR = 1.3648	BETABAR	64.802	53.687	49.398	48.761	52.187	60.309	70.976	
TR = 1.1028	EPSILON	-2.885	-2.113	-3.180	-4.983	-6.695	-7.004	-6.418	
EFF-A = 0.9066	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.9081	V-BAR	599.091	656.744	697.144	658.582	620.125	547.490	497.265	
	VZ-BAR	255.066	390.235	453.699	434.146	380.202	271.413	162.088	
	V-THET-BAR	542.079	530.396	529.304	495.220	489.879	475.127	470.107	
	MACH-BAR	0.525	0.581	0.617	0.581	0.544	0.476	0.429	
	U-WHEEL	630.795	649.299	686.310	723.321	760.333	797.344	815.849	
	V-BAR-PR	270.054	407.948	480.127	490.459	466.626	421.874	381.851	
	BETABAR-PR	19.179	16.953	19.085	27.719	35.431	49.954	64.882	
	V-THET-B-P	-88.716	-118.902	-157.006	-228.101	-270.453	-322.217	-345.742	
	MACH-BAR-P	0.237	0.360	0.425	0.433	0.409	0.367	0.330	
	D-FACTOR	0.866	0.670	0.589	0.587	0.645	0.728	0.790	
	TURNING	38.0	40.6	39.7	32.4	26.1	13.2	-0.7	
	INCID-M	-0.2	1.5	3.5	4.5	4.6	4.5	4.4	
	DEVIATION	31.0	20.7	10.5	10.0	10.2	18.7	31.0	
	OMEGABAR-P	0.374	0.162	0.012	0.018	0.113	0.259	0.348	
	LOSS PAR	0.124	0.056	0.004	0.006	0.039	0.073	0.066	
	PT-RATIO	1.274	1.339	1.403	1.385	1.363	1.315	1.285	1.3648
	EFF-AD	0.705	0.872	0.990	0.984	0.892	0.739	0.647	0.9066
	EFF-POLY	0.715	0.877	0.990	0.984	0.896	0.749	0.659	0.9081
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.691	19.636	20.584	20.350	20.041	19.346	18.882	20.042
	T-TOTAL	571.45	570.54	571.91	570.07	572.41	575.77	578.35	572.02
	P-STATIC	15.507	15.616	15.855	16.087	16.284	16.462	16.552	
	BETABAR	65.353	53.828	49.071	48.176	51.435	59.039	69.186	
	EPSILON	-0.113	-1.669	-3.131	-4.034	-5.043	-6.450	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	597.259	658.774	702.694	666.963	629.264	558.151	506.560	
	VZ-BAR	249.070	388.962	460.347	444.760	392.307	287.366	180.003	
	V-THET-BAR	542.845	531.326	530.898	497.016	491.973	478.153	473.503	
	MACH-BAR	0.523	0.581	0.622	0.589	0.553	0.486	0.438	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.333	19.199	19.789	19.541	19.244	18.864	18.438	19.324
ROTOR PLUS STATOR	T-TOTAL	571.45	570.54	571.91	570.11	571.95	575.19	578.35	572.02
-----	P-STATIC	17.432	17.441	17.435	17.405	17.370	17.334	17.316	
PR = 1.3159	BETABAR	15.955	13.911	12.909	11.415	11.372	11.658	11.341	
TR = 1.1028	EPSILON	0.450	-0.493	-1.383	-2.025	-2.592	-3.872	-5.489	
EFF-A = 0.7937	K-BAR	0.874	0.874	0.874	0.874	0.874	0.874	0.874	
EFF-P = 0.8015	V-BAR	313.314	430.041	494.165	472.060	445.203	406.143	381.462	
	VZ-BAR	301.245	417.453	481.691	462.721	436.462	397.764	344.600	
	V-THET-BAR	86.126	103.252	110.322	93.432	87.785	82.071	69.113	
IGV,ROTOR,STATOR	MACH-BAR	0.269	0.372	0.429	0.410	0.385	0.350	0.301	
-----	EFF-POLY	0.857	0.829	0.706	0.657	0.630	0.703	0.653	
PR = 1.3150	INCID-M	9.7	1.2	-1.8	-2.3	-0.1	5.4	14.4	
TR = 1.1028	DEVIATION	15.2	12.6	12.0	11.1	12.6	13.6	14.3	
EFF-A = 0.7941	OMEGA-BAR	0.112	0.109	0.168	0.190	0.212	0.167	0.191	
EFF-P = 0.7997	LOSS PAR	0.038	0.036	0.062	0.074	0.086	0.071	0.083	
	D-FACTOR	0.746	0.587	0.526	0.538	0.566	0.592	0.664	
	TURNING	49.4	39.9	36.2	36.8	40.1	47.4	57.6	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 53)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.453	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24550.0	P-STATIC	14.116	14.117	14.120	14.126	14.135	14.146	14.153	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.625	-4.245	-5.796	-7.295	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	266.600	266.493	265.773	264.375	262.261	259.444	257.736	
	VZ-BAR	266.600	266.493	265.773	264.375	262.261	259.444	257.736	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.240	0.240	0.239	0.238	0.236	0.234	0.232	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.670	14.672	14.678	14.690	14.692	14.692	14.691	14.685
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.908	13.909	13.915	13.922	13.930	13.940	13.945	
	BETABAR	7.567	10.035	11.662	12.116	12.120	10.025	6.542	
	EPSILON	-0.000	-0.910	-2.573	-4.190	-5.759	-7.291	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	307.003	307.013	307.293	308.078	306.572	304.578	303.408	
	VZ-BAR	304.330	302.306	300.949	301.215	299.738	299.919	301.432	
	V-THET-BAR	40.429	53.493	62.115	64.665	64.369	53.018	34.569	
	MACH-BAR	0.277	0.277	0.277	0.278	0.277	0.275	0.274	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.5	-3.7	-3.5	-4.4	-5.8	-9.2	-13.4	
	OMEGABAR	0.042	0.039	0.028	0.007	0.005	0.005	0.006	
	TURNING	-7.6	-10.0	-11.7	-12.1	-12.1	-10.0	-6.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.670	14.672	14.679	14.690	14.692	14.692	14.691	14.685
WCOR= 2.455	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24550.0	P-STATIC	13.459	13.464	13.470	13.474	13.477	13.477	13.475	
	BETABAR	5.957	7.987	9.380	9.836	9.876	8.172	5.348	
	EPSILON	-1.170	-1.793	-3.052	-4.433	-5.713	-6.551	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	389.266	388.605	388.692	389.906	389.623	389.511	389.729	
	VZ-BAR	387.164	384.828	383.495	384.175	383.849	385.548	388.033	
	V-THET-BAR	40.396	53.992	63.350	66.607	66.829	55.365	36.325	
	MACH-BAR	0.353	0.352	0.352	0.353	0.353	0.353	0.353	
	U-WHEEL	537.956	553.968	585.997	618.026	650.055	682.083	698.098	
	V-BAR-PR	630.445	630.928	648.253	672.054	698.210	735.819	767.146	
	BETABAR-PR	52.113	52.415	53.730	55.134	56.648	58.399	59.615	
	V-THET-B-P	-497.559	-499.976	-522.647	-551.419	-583.226	-626.718	-661.772	
	MACH-BAR-P	0.572	0.572	0.588	0.609	0.633	0.667	0.695	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.883	18.007	18.137	18.095	18.009	17.777	17.633	18.000
ROTOR	T-TOTAL	552.93	553.95	553.07	551.16	552.41	554.32	556.31	552.96
-----	P-STATIC	14.794	14.864	15.034	15.181	15.307	15.435	15.497	
PR = 1.2257	BETABAR	46.234	47.823	45.648	42.910	44.366	46.663	47.936	
TR = 1.0661	EPSILON	-2.885	-2.579	-3.154	-4.324	-5.453	-6.264	-6.818	
EFF-A = 0.9093	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.9091	V-BAR	591.855	595.737	588.925	569.293	548.793	513.297	492.020	
	VZ-BAR	409.396	399.991	411.671	416.961	392.328	352.271	329.634	
	V-THET-BAR	427.420	441.482	421.113	387.604	383.728	373.334	365.274	
	MACH-BAR	0.527	0.531	0.525	0.507	0.487	0.454	0.433	
	U-WHEEL	531.636	547.231	578.424	609.617	640.810	672.003	687.600	
	V-BAR-PR	422.452	413.740	440.764	472.417	469.078	461.848	461.034	
	BETABAR-PR	14.282	14.809	20.902	28.031	33.237	40.293	44.358	
	V-THET-B-P	-104.216	-105.749	-157.311	-222.012	-257.082	-298.669	-322.326	
	MACH-BAR-P	0.376	0.369	0.393	0.421	0.417	0.408	0.406	
	D-FACTOR	0.543	0.564	0.528	0.487	0.518	0.562	0.590	
	TURNING	37.8	37.6	32.8	27.1	23.4	18.1	15.3	
	INCID-M	-5.3	-3.7	-1.5	-0.4	-0.2	-0.2	-0.2	
	DEVIATION	26.1	18.5	12.3	10.4	8.0	9.1	10.5	
	OMEGABAR-P	0.126	0.124	0.061	0.017	0.069	0.156	0.217	
	LOSS PAR	0.043	0.043	0.022	0.006	0.024	0.052	0.070	
	PT-RATIO	1.219	1.227	1.236	1.232	1.226	1.210	1.200	1.2257
	EFF-AD	0.883	0.888	0.941	0.982	0.923	0.816	0.739	0.9093
	EFF-POLY	0.885	0.890	0.942	0.981	0.924	0.820	0.745	0.9091
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.883	18.005	18.137	18.097	18.012	17.780	17.633	18.000
	T-TOTAL	552.93	553.94	553.12	551.18	552.37	554.29	556.31	552.96
	P-STATIC	14.812	14.844	14.958	15.081	15.206	15.333	15.392	
	BETABAR	46.501	47.706	45.144	42.192	43.518	45.689	46.825	
	EPSILON	-0.113	-0.930	-2.379	-3.704	-5.343	-6.993	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	590.063	597.557	596.626	579.750	559.868	525.220	504.497	
	VZ-BAR	406.165	402.119	420.797	429.535	405.995	366.900	345.194	
	V-THET-BAR	428.023	442.011	422.927	389.369	385.505	375.818	367.911	
	MACH-BAR	0.526	0.532	0.532	0.517	0.498	0.465	0.445	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.030	17.480	17.898	17.885	17.788	17.385	17.091	17.682
ROTOR PLUS STATOR	T-TOTAL	552.93	553.90	553.14	551.18	552.36	554.30	556.31	552.96
-----------------	P-STATIC	15.921	15.928	15.928	15.908	15.876	15.833	15.810	
PR = 1.2041	BETABAR	15.726	14.566	12.309	11.607	12.377	12.406	11.249	
TR = 1.0661	EPSILON	0.450	-0.032	-1.355	-2.539	-3.675	-4.885	-5.489	
EFF-A = 0.8250	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8296	V-BAR	355.806	417.363	466.651	466.942	460.623	419.038	383.573	
	VZ-BAR	342.488	403.961	455.923	457.395	449.918	409.254	376.204	
	V-THET-BAR	96.435	104.890	99.472	93.945	98.727	90.024	78.823	
IGV,ROTOR,STATOR	MACH-BAR	0.312	0.367	0.411	0.413	0.406	0.368	0.335	
----------------	EFF-POLY	0.596	0.705	0.823	0.817	0.775	0.587	0.461	
PR = 1.2033	INCID-M	-9.2	-4.9	-5.7	-8.3	-8.0	-7.9	-8.0	
TR = 1.0661	DEVIATION	14.9	13.3	11.4	11.2	13.0	14.4	14.2	
EFF-A = 0.8256	OMEGA-BAR	0.278	0.166	0.075	0.070	0.080	0.161	0.242	
EFF-P = 0.8268	LOSS PAR	0.095	0.058	0.028	0.027	0.032	0.068	0.105	
	D-FACTOR	0.596	0.506	0.426	0.400	0.393	0.442	0.501	
	TURNING	30.8	33.1	32.8	30.6	31.1	33.3	35.6	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 54)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.398	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24463.0	P-STATIC	14.132	14.133	14.136	14.141	14.150	14.161	14.168	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.592	-4.224	-5.770	-7.295	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	262.804	262.691	262.003	260.656	258.613	255.837	254.150	
	VZ-BAR	262.804	262.691	262.003	260.656	258.613	255.837	254.150	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.237	0.237	0.236	0.235	0.233	0.230	0.229	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.671	14.673	14.679	14.690	14.691	14.692	14.691	14.686
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.927	13.929	13.934	13.941	13.950	13.960	13.964	
	BETABAR	9.811	10.544	11.578	12.066	12.057	9.757	6.544	
	EPSILON	-0.000	-0.883	-2.555	-4.131	-5.726	-7.291	-8.118	
	K-BAR	0.930	0.930	0.930	0.930	0.929	0.929	0.930	
	V-BAR	303.325	303.219	303.370	304.082	302.547	300.561	299.475	
	VZ-BAR	298.889	298.098	297.197	297.364	295.872	296.205	297.523	
	V-THET-BAR	51.688	55.488	60.885	63.564	63.199	50.935	34.131	
	MACH-BAR	0.274	0.274	0.274	0.274	0.273	0.271	0.270	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-3.3	-3.2	-3.6	-4.4	-5.8	-9.5	-13.4	
	OMEGABAR	0.041	0.039	0.028	0.007	0.005	0.005	0.006	
	TURNING	-9.8	-10.5	-11.6	-12.1	-12.1	-9.8	-6.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.671	14.673	14.679	14.690	14.691	14.692	14.691	14.686
WCOR= 2.400	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24463.0	P-STATIC	13.890	13.896	13.501	13.505	13.509	13.511	13.509	
	BETABAR	7.725	8.383	9.321	9.799	9.830	7.964	5.357	
	EPSILON	-1.170	-1.793	-3.145	-4.581	-5.858	-6.668	-6.637	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	384.226	383.551	383.603	384.718	384.222	383.922	384.178	
	VZ-BAR	380.739	379.452	378.538	379.105	378.581	380.213	382.501	
	V-THET-BAR	51.647	55.914	62.127	65.478	65.594	53.789	35.864	
	MACH-BAR	0.348	0.348	0.348	0.349	0.348	0.348	0.348	
	U-WHEEL	536.049	552.005	583.920	615.836	647.751	679.666	695.624	
	V-BAR-PR	616.123	624.575	644.642	668.295	694.432	732.831	762.620	
	BETABAR-PR	51.833	52.588	54.040	55.439	56.963	58.745	59.897	
	V-THET-B-P	-484.402	-496.091	-521.793	-550.357	-582.157	-626.477	-659.760	
	MACH-BAR-P	0.558	0.566	0.584	0.606	0.629	0.664	0.691	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.986	18.077	18.190	18.104	17.998	17.792	17.559	18.026
ROTOR	T-TOTAL	553.30	553.95	552.88	551.04	552.35	554.40	556.25	552.90
-----	P-STATIC	14.911	14.988	15.161	15.303	15.419	15.532	15.591	
PR = 1.2274	BETABAR	48.994	49.025	46.260	43.923	45.644	47.744	50.675	
TR = 1.0659	EPSILON	-2.885	-2.579	-3.092	-4.511	-5.716	-6.483	-6.418	
EFF-A = 0.9176	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.9170	V-BAR	588.857	589.071	580.319	557.135	535.579	503.550	472.409	
	VZ-BAR	386.370	386.267	401.201	401.289	374.431	338.615	299.373	
	V-THET-BAR	444.377	444.749	419.274	386.478	382.940	372.692	365.439	
	MACH-BAR	0.524	0.524	0.517	0.496	0.475	0.485	0.416	
	U-WHEEL	529.752	545.291	576.374	607.457	638.540	669.622	685.163	
	V-BAR-PR	395.690	399.158	430.924	458.145	453.366	450.377	438.004	
	BETABAR-PR	12.460	14.587	21.374	28.838	34.319	41.248	46.883	
	V-THET-B-P	-85.375	-100.543	-157.100	-220.978	-255.600	-296.930	-319.724	
	MACH-BAR-P	0.352	0.355	0.384	0.408	0.402	0.398	0.385	
	D-FACTOR	0.579	0.583	0.540	0.506	0.539	0.577	0.618	
	TURNING	39.4	38.0	32.7	26.6	22.6	17.5	13.0	
	INCID-M	-5.6	-3.5	-1.2	-0.1	0.1	0.1	0.1	
	DEVIATION	24.3	18.3	12.8	11.2	9.1	10.0	13.0	
	OMEGABAR-P	0.115	0.108	0.042	0.012	0.070	0.156	0.232	
	LOSS PAR	0.039	0.037	0.015	0.004	0.024	0.051	0.071	
	PT-RATIO	1.226	1.232	1.239	1.232	1.225	1.211	1.195	1.2274
	EFF-AD	0.899	0.905	0.960	0.988	0.921	0.818	0.723	0.9176
	EFF-POLY	0.901	0.907	0.960	0.987	0.923	0.822	0.729	0.9170
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.986	18.075	18.190	18.108	18.001	17.797	17.559	18.026
	T-TOTAL	553.30	553.94	552.93	551.05	552.31	554.36	556.25	552.90
	P-STATIC	14.932	14.976	15.096	15.216	15.325	15.437	15.498	
	BETABAR	49.339	49.020	45.836	43.259	44.794	46.745	49.518	
	EPSILON	-0.113	-0.957	-2.686	-3.631	-4.978	-6.050	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	586.631	590.127	586.979	566.569	546.062	515.106	483.925	
	VZ-BAR	382.239	387.004	408.935	412.608	387.515	352.974	314.170	
	V-THET-BAR	445.005	445.504	421.064	388.271	384.722	375.157	368.077	
	MACH-BAR	0.522	0.525	0.523	0.505	0.485	0.455	0.426	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.186	17.574	17.928	17.888	17.769	17.427	17.101	17.709
ROTOR PLUS STATOR	T-TOTAL	553.30	553.93	552.97	551.06	552.28	554.35	556.25	552.90
----------	P-STATIC	16.039	16.046	16.045	16.026	15.998	15.962	15.940	
PR = 1.2059	BETABAR	15.825	14.998	12.519	11.516	12.361	12.046	10.803	
TR = 1.0659	EPSILON	0.450	-0.115	-1.295	-2.460	-3.614	-4.885	-5.489	
EFF-A = 0.8333	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8377	V-BAR	360.446	413.086	455.278	452.394	442.790	406.210	368.616	
	VZ-BAR	346.785	399.025	444.450	443.286	432.525	397.264	358.155	
	V-THET-BAR	98.291	106.842	98.680	90.317	94.785	84.779	68.340	
IGV,ROTOR,STATOR	MACH-BAR	0.316	0. 33	0.401	0.399	0.390	0.356	0.319	
----------	EFF-POLY	0.610	0.710	0.804	0.807	0.769	0.613	0.514	
PR = 1.2052	INCID-M	-6.3	-3.6	-5.0	-7.3	-6.7	-6.9	-5.3	
TR = 1.0659	DEVIATION	15.0	13.7	11.6	11.2	13.0	14.0	13.7	
EFF-A = 0.8341	OMEGA-BAR	0.262	0.162	0.085	0.076	0.087	0.157	0.222	
EFF-P = 0.8350	LOSS PAR	0.089	0.057	0.031	0.030	0.035	0.066	0.096	
	D-FACTOR	0.595	0.509	0.435	0.413	0.413	0.460	0.525	
	TURNING	33.5	34.0	33.3	31.7	32.4	34.7	38.7	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 55)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
NCOR= 2.342	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24324.0	P-STATIC	14.160	14.160	14.163	14.168	14.176	14.187	14.194	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.598	-4.218	-5.770	-7.288	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	256.268	256.163	255.517	254.190	252.179	249.491	247.847	
	VZ-BAR	256.268	256.163	255.517	254.190	252.179	249.491	247.847	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.231	0.231	0.230	0.229	0.227	0.225	0.223	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.673	14.674	14.680	14.690	14.691	14.692	14.692	14.686
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.998	13.999	14.003	14.010	14.018	14.027	14.031	
	BETABAR	7.285	9.868	11.703	12.066	12.088	9.632	6.423	
	EPSILON	-0.000	-0.910	-2.542	-4.159	-5.729	-7.282	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	288.590	288.664	288.857	289.573	288.097	286.219	285.235	
	VZ-BAR	286.260	284.382	282.852	283.175	281.710	282.176	283.445	
	V-THET-BAR	36.596	49.468	58.592	60.532	60.329	47.889	31.906	
	MACH-BAR	0.260	0.260	0.260	0.261	0.260	0.258	0.257	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.8	-3.9	-3.4	-4.4	-5.8	-9.6	-13.5	
	OMEGABAR	0.041	0.038	0.028	0.008	0.006	0.006	0.006	
	TURNING	-7.3	-9.9	-11.7	-12.1	-12.1	-9.6	-6.4	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.673	14.674	14.680	14.691	14.691	14.692	14.692	14.686
NCOR= 2.343	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24324.0	P-STATIC	13.603	13.608	13.613	13.617	13.621	13.623	13.622	
	BETABAR	5.749	7.875	9.436	9.824	9.878	7.882	5.271	
	EPSILON	-1.170	-1.934	-3.361	-4.777	-5.962	-6.744	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	365.048	364.510	364.492	365.498	364.976	364.656	364.925	
	VZ-BAR	363.212	361.063	359.559	360.139	359.565	361.204	363.381	
	V-THET-BAR	36.567	49.943	59.759	62.359	62.610	50.004	33.526	
	MACH-BAR	0.330	0.330	0.330	0.331	0.330	0.330	0.330	
	U-WHEEL	533.003	548.869	580.603	612.337	644.071	675.804	691.671	
	V-BAR-PR	615.119	615.869	632.902	657.403	683.658	722.565	751.798	
	BETABAR-PR	53.809	54.107	55.380	56.782	58.267	60.006	61.096	
	V-THET-B-P	-496.436	-498.926	-520.844	-549.978	-581.461	-625.800	-658.745	
	MACH-BAR-P	0.557	0.557	0.573	0.595	0.619	0.654	0.681	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.056	18.098	18.216	18.063	17.960	17.736	17.515	18.009
ROTOR	T-TOTAL	553.71	553.97	553.23	551.01	552.32	554.47	556.20	552.99
-----	P-STATIC	14.922	14.992	15.158	15.304	15.426	15.545	15.603	
PR = 1.2263	BETABAR	47.245	48.443	46.485	44.085	45.879	48.515	51.477	
TR = 1.0661	EPSILON	-2.886	-2.540	-3.391	-4.605	-5.734	-6.475	-6.418	
EFF-A = 0.9108	K-BAR	0.895	0.895	0.895	0.895	0.895	0.895	0.895	
EFF-P = 0.9106	V-BAR	593.824	590.359	583.060	553.378	531.185	496.196	465.894	
	VZ-BAR	403.129	391.623	401.447	397.490	369.803	328.700	290.171	
	V-THET-BAR	436.021	441.761	422.832	385.004	381.316	371.698	364.497	
	MACH-BAR	0.529	0.526	0.519	0.492	0.471	0.438	0.410	
	U-WHEEL	526.742	542.193	573.099	604.005	634.912	665.818	681.270	
	V-BAR-PR	413.210	404.304	428.694	453.862	448.409	441.108	429.586	
	BETABAR-PR	12.683	14.384	20.514	28.851	34.441	41.824	47.510	
	V-THET-B-P	-90.720	-100.431	-150.267	-219.001	-253.596	-294.119	-316.773	
	MACH-BAR-P	0.368	0.360	0.382	0.404	0.398	0.389	0.378	
	D-FACTOR	0.554	0.571	0.539	0.505	0.540	0.586	0.624	
	TURNING	41.1	39.7	34.9	27.9	23.8	18.2	13.6	
	INCID-M	-3.6	-2.0	0.1	1.2	1.4	1.4	1.3	
	DEVIATION	24.5	18.1	11.9	11.2	9.3	10.6	13.7	
	OMEGABAR-P	0.109	0.105	0.048	0.022	0.080	0.173	0.246	
	LOSS PAR	0.037	0.037	0.017	0.008	0.028	0.057	0.075	
	PT-RATIO	1.231	1.233	1.241	1.230	1.222	1.207	1.192	1.2263
	EFF-AD	0.906	0.909	0.956	0.977	0.912	0.802	0.713	0.9108
	EFF-POLY	0.908	0.911	0.957	0.977	0.914	0.807	0.720	0.9106
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.056	18.096	18.215	18.068	17.963	17.741	17.515	18.009
	T-TOTAL	553.71	553.96	553.27	551.04	552.27	554.43	556.20	552.99
	P-STATIC	14.981	14.977	15.098	15.219	15.334	15.447	15.505	
	BETABAR	47.536	48.373	46.107	43.438	45.025	47.401	50.153	
	EPSILON	-0.113	-0.892	-2.550	-3.965	-5.348	-6.494	-7.979	
	K-BAR	0.895	0.895	0.895	0.895	0.895	0.895	0.895	
	V-BAR	591.889	591.740	589.155	562.794	541.541	508.307	478.181	
	VZ-BAR	399.601	393.081	408.451	408.653	382.765	344.055	306.389	
	V-THET-BAR	436.637	442.315	424.562	386.960	383.084	374.167	367.128	
	MACH-BAR	0.527	0.527	0.525	0.501	0.481	0.449	0.421	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.317	17.615	17.905	17.816	17.689	17.371	17.105	17.672
ROTOR PLUS STATOR	T-TOTAL	553.71	553.95	553.34	551.07	552.24	554.41	556.20	552.99
----------	P-STATIC	16.064	16.071	16.072	16.052	16.022	15.985	15.965	
PR = 1.2033	BETABAR	17.407	15.798	12.724	11.471	12.201	11.865	10.858	
TR = 1.0661	EPSILON	0.450	0.059	-1.148	-2.409	-3.627	-4.873	-5.489	
EFF-A = 0.8215	K-BAR	0.915	0.915	0.915	0.915	0.915	0.915	0.915	
EFF-P = 0.8261	V-BAR	375.802	414.716	449.451	440.832	430.044	395.361	361.098	
	VZ-BAR	358.593	399.059	438.408	432.027	420.331	386.914	354.634	
	V-THET-BAR	112.422	112.834	98.988	87.669	90.885	81.287	68.023	
IGV,ROTOR,STATOR	MACH-BAR	0.329	0.364	0.396	0.389	0.379	0.347	0.315	
----------	EFF-POLY	0.634	0.722	0.779	0.788	0.742	0.619	0.551	
PR = 1.2026	INCID-M	-8.1	-4.3	-4.7	-7.1	-6.5	-6.2	-4.6	
TR = 1.0661	DEVIATION	16.6	14.5	11.8	11.1	12.8	13.8	13.8	
EFF-A = 0.8221	OMEGA-BAR	0.237	0.154	0.099	0.088	0.104	0.162	0.204	
EFF-P = 0.8235	LOSS PAR	0.080	0.058	0.037	0.034	0.042	0.068	0.088	
	D-FACTOR	0.559	0.501	0.450	0.431	0.433	0.476	0.526	
	TURNING	30.1	32.6	33.4	32.0	32.8	35.5	39.3	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 56)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.296	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24522.0	P-STATIC	14.181	14.182	14.184	14.189	14.197	14.208	14.214	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.611	-4.203	-5.766	-7.290	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	250.952	250.853	250.220	248.923	246.957	244.320	242.701	
	VZ-BAR	250.952	250.853	250.220	248.923	246.957	244.320	242.701	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.226	0.226	0.225	0.224	0.222	0.220	0.218	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.673	14.675	14.680	14.690	14.691	14.691	14.692	14.686
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.026	14.027	14.031	14.038	14.045	14.054	14.058	
	BETABAR	7.796	9.810	11.627	12.198	12.032	9.775	6.299	
	EPSILON	-0.000	-0.879	-2.560	-4.159	-5.710	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	282.577	282.617	282.779	283.535	282.042	280.159	279.215	
	VZ-BAR	279.965	278.477	276.976	277.133	275.845	276.083	277.529	
	V-THET-BAR	38.330	48.153	56.990	59.908	58.794	47.564	30.632	
	MACH-BAR	0.255	0.255	0.255	0.256	0.254	0.252	0.252	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.3	-4.0	-3.5	-4.3	-5.8	-9.5	-13.6	
	OMEGABAR	0.041	0.038	0.028	0.008	0.006	0.006	0.006	
	TURNING	-7.8	-9.8	-11.6	-12.2	-12.0	-9.8	-6.3	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.673	14.675	14.680	14.691	14.691	14.691	14.692	14.686
WCOR= 2.297	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24522.0	P-STATIC	13.648	13.652	13.658	13.663	13.667	13.670	13.668	
	BETABAR	6.154	7.828	9.383	9.940	9.848	8.010	5.177	
	EPSILON	-1.170	-1.938	-3.535	-5.022	-6.193	-6.855	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	357.279	356.760	356.687	357.483	356.794	356.407	356.712	
	VZ-BAR	355.220	353.430	351.914	352.117	351.537	352.923	355.257	
	V-THET-BAR	38.299	48.587	58.151	61.705	61.024	49.663	32.188	
	MACH-BAR	0.323	0.323	0.323	0.323	0.323	0.322	0.323	
	U-WHEEL	537.342	553.336	585.329	617.321	649.313	681.305	697.302	
	V-BAR-PR	612.556	616.187	633.848	657.799	685.323	723.555	754.044	
	BETABAR-PR	54.557	55.000	56.274	57.635	59.138	60.805	61.892	
	V-THET-B-P	-499.043	-504.750	-527.178	-555.615	-588.289	-631.642	-665.113	
	MACH-BAR-P	0.554	0.557	0.573	0.595	0.620	0.655	0.682	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.132	18.207	18.246	18.076	17.923	17.734	17.486	18.020
ROTOR	T-TOTAL	553.87	553.72	553.60	551.38	552.77	554.49	556.20	553.19
-----	P-STATIC	15.027	15.097	15.250	15.383	15.503	15.616	15.672	
PR = 1.2270	BETABAR	47.740	47.573	47.132	45.478	47.266	49.116	52.604	
TR = 1.0665	EPSILON	-2.886	-2.776	-3.585	-4.665	-5.925	-6.490	-6.418	
EFF-A = 0.9074	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.9080	V-BAR	589.607	588.766	576.451	540.732	519.200	487.521	453.733	
	VZ-BAR	396.507	397.213	392.162	379.151	352.325	319.115	275.563	
	V-THET-BAR	436.369	434.589	422.497	385.532	381.360	368.552	360.470	
	MACH-BAR	0.525	0.524	0.513	0.480	0.460	0.430	0.399	
	U-WHEEL	531.030	546.606	577.764	608.921	640.080	671.237	686.816	
	V-BAR-PR	407.650	412.715	421.808	440.076	437.125	439.888	427.125	
	BETABAR-PR	13.427	15.748	21.598	30.505	36.290	43.489	49.823	
	V-THET-B-P	-94.660	-112.018	-155.267	-223.389	-258.719	-302.685	-326.345	
	MACH-BAR-P	0.363	0.367	0.375	0.391	0.387	0.388	0.375	
	D-FACTOR	0.560	0.554	0.552	0.528	0.559	0.587	0.627	
	TURNING	41.1	39.3	34.7	27.1	22.8	17.3	12.1	
	INCID-M	-2.8	-1.1	1.0	2.1	2.2	2.2	2.1	
	DEVIATION	25.3	19.5	13.0	12.8	11.1	12.3	16.0	
	OMEGABAR-P	0.093	0.067	0.051	0.044	0.100	0.173	0.251	
	LOSS PAR	0.032	0.023	0.018	0.015	0.034	0.055	0.073	
	PT-RATIO	1.236	1.241	1.243	1.226	1.220	1.207	1.190	1.2270
	EFF-AD	0.920	0.942	0.953	0.954	0.891	0.801	0.706	0.9074
	EFF-POLY	0.922	0.943	0.954	0.954	0.893	0.806	0.713	0.9080
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.132	18.205	18.248	18.023	17.925	17.739	17.486	18.020
	T-TOTAL	553.87	553.73	553.63	551.43	552.74	554.45	556.20	553.19
	P-STATIC	15.040	15.077	15.189	15.308	15.414	15.519	15.570	
	BETABAR	47.967	47.470	46.677	44.859	46.385	47.957	51.062	
	EPSILON	-0.113	-0.625	-2.229	-4.190	-5.330	-6.895	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	588.332	590.600	582.788	549.538	529.407	499.639	466.776	
	VZ-BAR	393.926	399.229	399.851	389.537	365.187	334.612	293.357	
	V-THET-BAR	436.986	435.229	423.980	387.625	383.288	371.036	363.072	
	MACH-BAR	0.524	0.526	0.519	0.489	0.469	0.441	0.410	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.386	17.693	17.982	17.835	17.710	17.360	17.114	17.709
ROTOR PLUS STATOR	T-TOTAL	553.87	553.73	553.67	551.48	552.68	554.42	556.20	553.19
-----------------	P-STATIC	16.146	16.156	16.156	16.137	16.109	16.073	16.055	
PR = 1.2058	BETABAR	17.380	16.124	13.023	11.575	12.361	12.087	11.139	
TR = 1.0665	EPSILON	0.450	0.059	-1.062	-2.265	-3.499	-4.784	-5.489	
EFF-A = 0.8260	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8306	V-BAR	373.072	413.117	447.674	432.746	421.167	380.669	347.672	
	VZ-BAR	356.039	396.874	436.153	423.357	411.403	372.229	341.122	
	V-THET-BAR	111.442	114.673	100.876	86.711	90.160	79.715	67.167	
IGV,ROTOR,STATOR	MACH-BAR	0.327	0.363	0.394	0.381	0.370	0.333	0.303	
----------------	EFF-POLY	0.627	0.706	0.803	0.828	0.789	0.620	0.587	
PR = 1.2051	INCID-M	-7.7	-5.2	-4.2	-5.7	-5.1	-5.7	-3.7	
TR = 1.0665	DEVIATION	16.6	14.8	12.1	11.2	13.0	14.1	14.1	
EFF-A = 0.8260	OMEGA-BAR	0.241	0.164	0.087	0.069	0.086	0.171	0.194	
EFF-P = 0.8287	LOSS PAR	0.082	0.057	0.032	0.027	0.035	0.072	0.084	
	D-FACTOR	0.562	0.498	0.445	0.435	0.438	0.495	0.540	
	TURNING	30.6	31.3	33.7	33.3	34.0	35.9	39.9	

Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 57)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.216	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24452.0	P-STATIC	14.217	14.218	14.220	14.225	14.232	14.242	14.248	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.615	-4.228	-5.757	-7.288	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	241.815	241.720	241.098	239.868	238.014	235.489	233.931	
	VZ-BAR	241.815	241.720	241.098	239.868	238.014	235.489	233.931	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.218	0.217	0.217	0.216	0.214	0.212	0.210	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.675	14.676	14.681	14.691	14.691	14.691	14.692	14.687
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.073	14.074	14.078	14.084	14.091	14.099	14.103	
	BETABAR	6.942	9.898	11.675	12.212	12.313	9.811	5.571	
	EPSILON	-0.000	-0.879	-2.563	-4.135	-5.694	-7.282	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	272.313	272.425	272.488	273.178	271.663	269.800	268.997	
	VZ-BAR	270.318	268.356	266.851	266.997	265.414	265.841	267.727	
	V-THET-BAR	32.911	46.826	55.139	57.783	57.934	45.974	26.113	
	MACH-BAR	0.245	0.245	0.245	0.246	0.245	0.243	0.242	
	INCID-B	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.1	-3.9	-3.5	-4.3	-5.6	-9.4	-14.3	
	OMEGABAR	0.041	0.038	0.028	0.008	0.007	0.007	0.006	
	TURNING	-6.9	-9.9	-11.7	-12.2	-12.3	-9.8	-5.6	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.675	14.676	14.681	14.691	14.691	14.691	14.692	14.687
WCOR= 2.217	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24452.0	P-STATIC	13.723	13.727	13.732	13.737	13.743	13.746	13.745	
	BETABAR	5.488	7.916	9.430	9.964	10.096	8.054	4.591	
	EPSILON	-1.170	-1.955	-3.632	-5.285	-6.708	-7.197	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	343.840	343.399	343.296	344.066	343.114	342.451	342.837	
	VZ-BAR	342.263	340.116	338.657	338.876	337.801	339.063	341.737	
	V-THET-BAR	32.884	47.293	56.245	59.534	60.145	47.978	27.439	
	MACH-BAR	0.311	0.310	0.310	0.311	0.310	0.310	0.310	
	U-WHEEL	535.808	551.757	583.658	615.559	647.460	679.361	695.311	
	V-BAR-ER	608.339	608.410	626.783	651.156	677.534	716.668	750.224	
	BETABAR-PR	55.763	56.012	57.294	58.639	60.093	61.762	62.902	
	V-THET-R-P	-502.924	-504.464	-527.413	-556.025	-587.315	-631.383	-667.872	
	MACH-BAR-P	0.550	0.550	0.567	0.589	0.613	0.648	0.678	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.088	18.213	18.314	18.100	17.939	17.631	17.456	18.044
ROTOR	T-TOTAL	554.39	553.85	553.77	551.32	552.58	554.64	556.36	553.21
-----	P-STATIC	15.104	15.177	15.340	15.483	15.600	15.708	15.763	
PR = 1.2286	BETABAR	49.230	48.608	47.613	45.590	48.162	52.282	54.791	
TR = 1.0665	EPSILON	-2.886	-2.597	-3.425	-5.048	-6.321	-6.750	-6.418	
EFF-A = 0.9130	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.9132	V-BAR	578.275	581.267	573.089	537.608	509.692	464.898	438.180	
	VZ-BAR	377.629	384.334	386.336	376.217	339.993	284.453	252.640	
	V-THET-BAR	437.948	436.071	423.290	384.034	379.704	367.689	358.015	
	MACH-BAR	0.514	0.517	0.509	0.478	0.451	0.409	0.384	
	U-WHEEL	529.513	545.047	576.115	607.184	638.252	669.321	684.855	
	V-BAR-ER	388.571	399.492	415.478	437.438	427.188	414.712	413.100	
	BETABAR-PR	13.630	15.829	21.581	30.678	37.256	46.681	52.297	
	V-THET-R-P	-91.566	-108.976	-152.825	-223.150	-258.548	-301.632	-326.840	
	MACH-BAR-P	0.345	0.355	0.369	0.389	0.378	0.365	0.362	
	D-FACTOR	0.593	0.571	0.559	0.528	0.569	0.621	0.645	
	TURNING	42.1	40.2	35.7	28.0	22.8	15.1	10.6	
	INCID-R	-1.6	-0.1	2.0	3.1	3.2	3.1	3.1	
	DEVIATION	25.5	19.6	13.0	13.0	12.1	15.5	18.4	
	OMEGABAR-P	0.125	0.072	0.039	0.022	0.093	0.201	0.263	
	LOSS PAR	0.043	0.025	0.014	0.008	0.031	0.061	0.072	
	PT-RATIO	1.233	1.241	1.247	1.232	1.221	1.200	1.188	1.2286
	EFF-AD	0.896	0.940	0.965	0.978	0.900	0.773	0.696	0.9130
	EFF-POLY	0.898	0.941	0.965	0.977	0.902	0.778	0.703	0.9132
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.088	18.210	18.314	18.104	17.946	17.635	17.456	18.044
	T-TOTAL	554.39	553.86	553.79	551.31	552.54	554.60	556.36	553.21
	P-STATIC	15.120	15.163	15.288	15.415	15.523	15.627	15.681	
	BETABAR	49.519	48.580	47.252	44.992	47.310	51.133	53.425	
	EPSILON	-0.113	-0.917	-2.758	-4.142	-5.387	-6.840	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	576.591	582.375	578.431	545.375	519.098	475.506	449.021	
	VZ-BAR	374.322	385.282	392.623	385.693	351.974	298.414	267.559	
	V-THET-BAR	438.566	436.711	424.766	385.583	381.531	370.188	360.599	
	MACH-BAR	0.512	0.518	0.514	0.485	0.460	0.419	0.394	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	17.468	17.706	17.994	17.811	17.637	17.325	17.133	17.692
ROTOR PLUS STATOR	T-TOTAL	554.39	553.88	553.83	551.42	552.43	554.49	556.36	553.21
-----------------	P-STATIC	16.230	16.237	16.239	16.220	16.193	16.163	16.146	
PR = 1.2046	BETABAR	18.448	17.204	13.863	12.557	12.728	12.377	11.266	
TR = 1.0665	EPSILON	0.450	0.048	-1.065	-2.153	-3.176	-4.560	-5.489	
EFF-A = 0.8211	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8258	V-BAR	372.120	403.233	438.520	418.136	400.012	361.788	335.119	
	VZ-BAR	352.996	385.198	425.741	408.135	390.182	353.378	328.662	
	V-THET-BAR	117.756	119.218	105.063	90.907	88.133	77.553	65.470	
IGV,ROTOR,STATOR	MACH-BAR	0.326	0.354	0.386	0.368	0.351	0.317	0.292	
----------------	EFF-POLY	0.669	0.707	0.770	0.749	0.716	0.664	0.609	
PR = 1.2040	INCID-B	-6.1	-4.1	-3.6	-5.5	-8.2	-2.5	-1.4	
TR = 1.0665	DEVIATION	17.7	15.9	13.0	12.2	13.4	14.4	14.2	
EFF-A = 0.8213	OMEGA-BAR	0.209	0.166	0.106	0.109	0.127	0.154	0.182	
EFF-P = 0.8234	LOSS PAR	0.070	0.057	0.039	0.042	0.052	0.065	0.079	
	D-FACTOR	0.552	0.505	0.455	0.453	0.469	0.512	0.549	
	TURNING	31.1	31.4	33.4	32.4	34.6	38.8	42.2	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 58)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.131	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24398.0	P-STATIC	14.254	14.255	14.257	14.262	14.269	14.278	14.284	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.913	-2.616	-4.229	-5.780	-7.286	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	232.176	232.094	231.451	230.208	228.321	225.790	224.245	
	VZ-BAR	232.176	232.094	231.451	230.208	228.321	225.790	224.245	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.209	0.209	0.208	0.207	0.205	0.203	0.202	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.676	14.677	14.681	14.691	14.691	14.691	14.692	14.687
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.096	14.097	14.102	14.107	14.114	14.122	14.126	
	BETABAR	6.819	9.665	11.492	12.029	11.966	9.746	5.995	
	EPSILON	-0.000	-0.882	-2.560	-4.142	-5.724	-7.280	-8.118	
	K-BAR	0.930	0.930	0.930	0.930	0.929	0.929	0.930	
	V-BAR	267.037	267.127	267.092	267.786	266.261	264.505	263.844	
	VZ-BAR	265.148	263.323	261.738	261.907	260.475	260.678	262.401	
	V-THET-BAR	31.705	44.846	53.211	55.806	55.204	44.773	27.557	
	MACH-BAR	0.241	0.241	0.241	0.241	0.240	0.238	0.238	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.3	-4.1	-3.6	-4.5	-5.9	-9.5	-13.9	
	OMEGABAR	0.042	0.039	0.030	0.009	0.008	0.008	0.006	
	TURNING	-6.8	-9.7	-11.5	-12.0	-12.0	-9.7	-6.0	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.676	14.677	14.682	14.691	14.691	14.691	14.692	14.687
WCOR= 2.132	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24398.0	P-STATIC	13.761	13.764	13.769	13.774	13.780	13.784	13.782	
	BETABAR	5.394	7.734	9.284	9.814	9.815	8.012	4.945	
	EPSILON	-1.170	-1.881	-3.614	-5.437	-7.045	-7.560	-6.637	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	337.006	336.589	336.482	337.231	336.178	335.418	335.906	
	VZ-BAR	335.513	333.518	332.074	332.295	331.257	332.137	334.656	
	V-THET-BAR	31.680	45.293	54.282	57.483	57.308	46.746	28.957	
	MACH-BAR	0.305	0.304	0.304	0.305	0.304	0.303	0.304	
	U-WHEEL	534.625	550.538	582.369	614.199	646.030	677.860	693.776	
	V-BAR-PR	604.585	605.399	623.821	648.350	675.521	713.179	748.297	
	BETABAR-PR	56.293	56.571	57.836	59.167	60.634	62.242	63.280	
	V-THET-B-P	-502.945	-505.246	-528.087	-556.716	-588.721	-631.114	-664.819	
	MACH-BAR-P	0.546	0.547	0.564	0.586	0.610	0.644	0.673	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.985	18.210	18.420	18.215	18.002	17.577	17.442	18.100
ROTOR	T-TOTAL	554.59	554.16	554.19	551.80	552.98	555.25	556.67	553.60
-----	P-STATIC	15.136	15.217	15.390	15.539	15.654	15.762	15.816	
PR = 1.2324	BETABAR	51.010	49.367	47.633	45.578	48.375	55.431	57.695	
TR = 1.0673	EPSILON	-2.885	-2.505	-3.477	-5.111	-6.527	-6.826	-6.418	
EFF-A = 0.9171	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
EFF-P = 0.9169	V-BAR	565.957	577.026	577.270	542.432	510.003	452.152	429.439	
	VZ-BAR	356.094	375.771	389.007	379.668	338.794	256.621	229.503	
	V-THET-BAR	439.891	437.892	426.512	387.407	381.166	372.203	362.969	
	MACH-BAR	0.502	0.513	0.513	0.482	0.451	0.398	0.376	
	U-WHEEL	528.344	543.843	574.843	605.843	636.843	667.843	683.343	
	V-BAR-PR	366.915	390.428	416.338	438.053	424.517	391.676	394.095	
	BETABAR-PR	13.950	15.743	20.871	29.913	37.051	49.048	54.384	
	V-THET-B-P	-88.853	-105.950	-148.330	-218.435	-255.677	-295.639	-320.374	
	MACH-BAR-P	0.326	0.347	0.370	0.389	0.376	0.384	0.345	
	D-FACTOR	0.628	0.587	0.559	0.529	0.576	0.655	0.670	
	TURNING	42.3	40.8	37.0	29.3	23.6	13.2	8.9	
	INCID-M	-1.1	0.4	2.6	3.6	3.7	3.6	3.5	
	DEVIATION	25.8	19.5	12.3	12.2	11.9	17.8	20.5	
	OMEGABAR-P	0.164	0.084	0.024	0.007	0.088	0.228	0.276	
	LOSS PAR	0.056	0.029	0.009	0.002	0.030	0.066	0.072	
	PT-RATIO	1.225	1.241	1.255	1.240	1.225	1.196	1.187	1.2324
	EFF-AD	0.865	0.931	0.979	0.994	0.906	0.747	0.687	0.9171
	EFF-POLY	0.868	0.932	0.979	0.993	0.908	0.752	0.694	0.9169
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.985	18.206	18.419	18.221	18.013	17.582	17.442	18.100
	T-TOTAL	554.59	554.16	554.20	551.80	552.92	555.20	556.67	553.60
	P-STATIC	15.157	15.209	15.339	15.474	15.587	15.693	15.747	
	BETABAR	51.390	49.416	47.300	45.039	47.586	54.275	56.435	
	EPSILON	-0.113	-1.286	-2.893	-4.205	-5.359	-6.913	-7.979	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	563.741	577.541	582.344	549.881	518.634	461.670	438.745	
	VZ-BAR	351.784	375.734	394.921	388.562	349.829	269.626	242.574	
	V-THET-BAR	440.513	438.596	427.970	389.086	382.843	374.698	365.589	
	MACH-BAR	0.500	0.513	0.518	0.489	0.459	0.406	0.385	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.486	17.714	18.027	17.820	17.628	17.342	17.151	17.703
ROTOR PLUS STATOR	T-TOTAL	554.59	554.17	554.23	551.88	552.71	555.00	556.67	553.60
----------	P-STATIC	16.324	16.327	16.325	16.307	16.286	16.263	16.252	
PR = 1.2054	BETABAR	18.289	17.179	14.204	13.361	13.508	13.592	13.325	
TR = 1.0673	EPSILON	0.450	-0.013	-1.089	-2.075	-2.920	-4.327	-5.489	
EFF-A = 0.8148	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8196	V-BAR	360.077	391.380	431.348	407.311	384.812	348.209	319.529	
	VZ-BAR	341.887	373.928	418.159	396.287	374.167	338.458	310.927	
	V-THET-BAR	112.998	115.548	105.834	94.121	89.884	81.831	73.644	
IGV,ROTOR,STATOR	MACH-BAR	0.315	0.343	0.379	0.358	0.338	0.304	0.278	
----------	EFF-POLY	0.724	0.720	0.740	0.696	0.680	0.741	0.651	
PR = 1.2048	INCID-M	-4.3	-3.2	-3.5	-5.5	-3.9	0.6	1.7	
TR = 1.0673	DEVIATION	17.5	15.9	13.3	13.0	14.1	15.6	16.3	
EFF-A = 0.8149	OMEGA-BAR	0.176	0.164	0.127	0.146	0.161	0.127	0.172	
EFF-P = 0.8174	LOSS PAR	0.059	0.057	0.047	0.057	0.065	0.053	0.074	
	D-FACTOR	0.567	0.525	0.472	0.478	0.499	0.529	0.571	
	TURNING	33.1	32.2	33.1	31.7	34.1	40.7	43.1	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 59)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.616	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WLOR= 2.099	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24314.0	P-STATIC	14.266	14.266	14.271	14.275	14.281	14.290	14.295	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.596	-4.196	-5.782	-7.288	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	228.479	228.390	227.810	226.657	224.880	222.504	221.039	
	VZ-BAR	228.479	228.390	227.810	226.657	224.880	222.504	221.039	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.205	0.205	0.205	0.204	0.202	0.200	0.199	
IGV TRAILING EDGE	DIAMETER	5.618	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.677	14.678	14.682	14.691	14.691	14.691	14.692	14.687
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.154	14.155	14.159	14.164	14.170	14.177	14.180	
	BETABAR	8.537	10.135	11.516	11.977	11.793	9.359	5.718	
	EPSILON	-0.000	-0.679	-2.530	-4.136	-5.702	-7.282	-8.116	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	253.499	253.588	253.574	254.321	252.880	251.178	250.590	
	VZ-BAR	250.690	249.650	248.469	248.785	247.542	247.825	249.343	
	V-THET-BAR	37.633	44.490	56.625	52.776	51.684	40.846	24.966	
	MACH-BAR	0.228	0.228	0.228	0.229	0.228	0.226	0.226	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.5	-3.7	-3.6	-4.5	-6.1	-9.9	-14.2	
	OMEGABAR	0.042	0.038	0.030	0.009	0.008	0.009	0.006	
	TURNING	-8.5	-10.1	-11.5	-12.0	-11.8	-9.4	-5.7	
ROTOR LEADING EDGE	DIAMETER	5.622	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.677	14.678	14.682	14.691	14.691	14.691	14.692	14.687
WCOR= 2.160	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24314.0	P-STATIC	13.853	13.857	13.860	13.864	13.870	13.874	13.872	
	BETABAR	6.763	8.086	9.319	9.787	9.688	7.708	4.725	
	EPSILON	-1.170	-1.752	-3.536	-5.428	-7.138	-7.742	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	319.311	318.923	318.918	319.794	318.736	317.910	316.457	
	VZ-BAR	317.084	315.749	314.709	315.140	314.192	315.030	317.375	
	V-THET-BAR	37.603	44.860	51.640	54.359	53.639	42.638	26.234	
	MACH-BAR	0.286	0.288	0.288	0.289	0.288	0.287	0.286	
	U-WHEEL	532.784	548.643	560.364	612.085	643.806	675.526	691.387	
	V-BAR-PR	588.006	594.556	615.300	640.605	668.594	706.962	736.996	
	BETABAR-PR	57.367	57.922	59.237	60.531	61.969	63.536	64.492	
	V-THET-B-P	-495.182	-503.783	-528.724	-557.726	-590.167	-632.888	-665.152	
	MACH-BAR-P	0.531	0.557	0.556	0.578	0.604	0.638	0.665	
ROTOR TRAILING EDGE	DIAMETER	4.563	5.169	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.866	18.161	18.472	18.243	18.064	17.600	17.442	18.128
ROTOR	T-TOTAL	554.70	554.13	554.49	551.98	553.17	555.84	557.08	553.8
PR = 1.2343	P-STATIC	15.195	15.286	15.463	15.614	15.730	15.835	15.891	
TR = 1.0677	BETABAR	54.778	50.664	48.183	46.107	48.479	57.217	60.546	
EFF-A = 0.9185	EPSILON	-2.885	-2.515	-3.486	-5.104	-6.594	-6.854	-6.416	
EFF-P = 0.9179	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
	V-BAR	549.053	566.160	574.495	536.950	507.536	445.520	419.190	
	VZ-BAR	316.663	356.721	383.042	372.275	336.463	241.351	206.127	
	V-THET-BAR	448.535	457.969	428.161	386.946	379.944	374.328	365.010	
	MACH-BAR	0.467	0.503	0.510	0.477	0.449	0.391	0.367	
	U-WHEEL	526.525	541.970	572.863	603.757	634.650	665.543	680.990	
	V-BAR-PR	326.125	373.504	409.479	430.639	422.058	378.536	377.269	
	BETABAR-PR	13.836	16.159	20.693	30.215	37.135	50.372	56.682	
	V-THET-B-P	-77.990	-104.001	-144.702	-216.811	-254.706	-291.215	-315.986	
	MACH-BAR-P	0.269	0.332	0.364	0.382	0.373	0.332	0.330	
	D-FACTOR	0.686	0.668	0.566	0.537	0.577	0.675	0.692	
	TURNING	43.5	41.6	36.5	30.3	24.8	13.2	7.6	
	INCID-M	-0.0	1.8	4.0	5.0	5.1	4.9	4.7	
	DEVIATION	25.7	19.9	12.1	12.5	11.9	19.2	23.0	
	OMEGABAR-P	0.212	0.101	0.020	0.005	0.080	0.240	0.295	
	LOSS PAR	0.074	0.035	0.007	0.002	0.027	0.067	0.071	
	PT-RATIO	1.217	1.237	1.258	1.242	1.230	1.198	1.187	1.2343
	EFF-AD	0.834	0.919	0.984	0.996	0.917	0.741	0.680	0.9185
	EFF-POLY	0.838	0.921	0.983	0.995	0.918	0.746	0.667	0.9179
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.868	18.155	18.470	18.247	18.076	17.607	17.442	18.128
	T-TOTAL	554.70	554.14	554.50	551.98	553.09	555.79	557.08	553.82
	P-STATIC	15.207	15.270	15.411	15.554	15.662	15.761	15.815	
	BETABAR	55.082	50.746	47.830	45.626	47.637	55.779	58.645	
	EPSILON	-0.113	-1.172	-2.598	-4.551	-6.936	-7.072	-7.479	
	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
	V-BAR	547.789	566.725	579.616	543.769	516.354	455.923	429.653	
	VZ-BAR	313.560	358.668	389.111	380.266	347.953	256.508	222.351	
	V-THET-BAR	449.168	438.774	429.585	388.693	381.467	376.794	367.644	
	MACH-BAR	0.485	0.503	0.515	0.483	0.457	0.401	0.377	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.403	17.692	18.031	17.794	17.579	17.363	17.177	17.640
ROTOR PLUS STATOR	T-TOTAL	554.70	554.14	554.51	552.05	552.82	555.53	557.08	553.82
PR = 1.2045	P-STATIC	16.244	16.350	16.350	16.330	16.307	16.284	16.271	
TR = 1.0677	BETABAR	18.159	16.681	14.535	14.020	14.166	14.385	14.261	
EFF-A = 0.8063	EPSILON	0.450	-0.167	-1.219	-2.107	-2.625	-4.184	-5.489	
EFF-P = 0.8114	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	344.135	385.078	426.620	400.864	375.542	348.153	320.618	
	VZ-BAR	327.000	368.882	414.901	388.922	364.122	337.239	316.736	
IGV,ROTOR,STATOR	V-THET-BAR	107.256	110.479	107.569	97.116	91.909	86.492	78.979	
	MACH-BAR	0.301	0.337	0.376	0.352	0.329	0.304	0.279	
PR = 1.2039	EFF-POLY	0.731	0.725	0.709	0.654	0.665	0.726	0.649	
TR = 1.0677	INCID-M	-4.6	-1.9	-3.0	-4.9	-3.9	2.1	4.1	
EFF-A = 0.8065	DEVIATION	17.4	15.4	13.6	13.7	14.8	16.4	17.2	
EFF-P = 0.8091	OMEGA-BAR	0.175	0.160	0.144	0.168	0.206	0.132	0.163	
	LOSS PAR	0.059	0.056	0.053	0.065	0.083	0.055	0.070	
	D-FACTOR	0.593	0.531	0.474	0.481	0.512	0.523	0.556	
	TURNING	36.9	34.1	33.3	31.6	33.5	41.4	44.6	

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Table C-4. Scaled Stage with Increased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 60)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 1.987	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24432.0	P-STATIC	14.313	14.314	14.316	14.320	14.325	14.333	14.338	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.615	-4.253	-5.788	-7.284	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	215.849	215.757	215.215	214.107	212.432	210.180	208.802	
	VZ-BAR	215.849	215.757	215.215	214.107	212.432	210.180	208.802	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.194	0.194	0.193	0.192	0.191	0.189	0.188	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.678	14.680	14.683	14.691	14.691	14.691	14.692	14.687
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.212	14.213	14.216	14.221	14.226	14.232	14.236	
	BETABAR	7.440	9.510	11.192	11.958	11.959	9.722	5.705	
	EPSILON	-0.000	-0.879	-2.547	-4.170	-5.718	-7.260	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	239.216	239.381	239.301	240.144	238.687	237.007	236.555	
	VZ-BAR	237.201	236.085	234.750	234.928	233.507	233.594	235.383	
	V-THET-BAR	30.977	39.548	46.445	49.779	49.458	40.022	23.514	
	MACH-BAR	0.215	0.215	0.215	0.216	0.215	0.213	0.213	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.6	-4.3	-3.9	-4.5	-5.9	-9.5	-14.2	
	OMEGABAR	0.042	0.038	0.031	0.009	0.010	0.010	0.006	
	TURNING	-7.4	-9.5	-11.2	-12.0	-12.0	-9.7	-5.7	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.678	14.680	14.683	14.691	14.691	14.691	14.692	14.687
WCOR= 1.988	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24432.0	P-STATIC	13.946	13.949	13.951	13.958	13.960	13.964	13.962	
	BETABAR	5.906	7.634	9.072	9.789	9.842	8.018	4.721	
	EPSILON	-1.470	-1.488	-3.439	-5.674	-7.649	-8.237	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	300.802	300.441	300.599	301.589	300.398	299.522	300.207	
	VZ-BAR	299.206	297.773	296.838	297.198	295.977	296.587	299.188	
	V-THET-BAR	30.952	39.908	47.398	51.274	51.345	41.777	24.709	
	MACH-BAR	0.271	0.271	0.271	0.272	0.271	0.270	0.271	
	U-WHEEL	535.370	551.306	583.181	615.055	646.930	678.805	694.742	
	V-BAR-PR	586.482	591.775	612.519	637.322	665.077	702.689	733.798	
	BETABAR-PR	59.325	59.789	61.012	62.203	63.574	65.033	65.938	
	V-THET-B-P	-504.418	-511.397	-535.783	-563.781	-595.585	-637.028	-670.034	
	MACH-BAR-P	0.529	0.534	0.553	0.575	0.600	0.634	0.662	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.471	18.024	18.467	18.265	18.117	17.686	17.456	18.141
ROTOR	T-TOTAL	554.49	554.07	555.05	553.42	554.78	557.37	558.90	554.79
------	P-STATIC	15.217	15.304	15.490	15.643	15.759	15.870	15.927	
PR = 1.2351	BETABAR	59.493	51.254	48.471	47.716	50.156	58.391	65.051	
TR = 1.0696	EPSILON	-2.885	-2.289	-3.269	-5.190	-6.716	-6.996	-6.418	
EFF-A = 0.8969	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
EFF-P = 0.8970	V-BAR	507.730	551.213	571.511	536.518	510.164	451.600	416.675	
	VZ-BAR	257.744	345.052	378.910	360.978	326.865	236.842	175.758	
	V-THET-BAR	437.444	429.699	427.846	396.921	391.694	384.295	377.792	
	MACH-BAR	0.449	0.489	0.507	0.476	0.451	0.396	0.368	
	U-WHEEL	529.080	544.601	575.644	606.687	637.730	668.773	684.295	
	V-BAR-PR	273.549	363.680	406.728	417.538	409.120	370.541	353.320	
	BETABAR-PR	19.572	18.418	21.308	30.160	36.970	50.260	60.169	
	V-THET-B-P	-91.636	-114.901	-147.798	-209.766	-246.036	-284.478	-306.503	
	MACH-BAR-P	0.242	0.323	0.361	0.370	0.361	0.325	0.309	
	D-FACTOR	0.775	0.621	0.571	0.568	0.604	0.692	0.732	
	TURNING	39.8	41.4	39.7	32.0	26.6	14.8	5.8	
	INCID-M	1.9	3.7	5.7	6.7	6.7	6.4	6.2	
	DEVIATION	31.4	22.2	12.7	12.5	11.8	19.0	26.3	
	OMEGABAR-P	0.330	0.143	0.040	0.043	0.112	0.259	0.331	
	LOSS PAR	0.109	0.049	0.018	0.015	0.038	0.073	0.074	
	PT-RATIO	1.190	1.228	1.258	1.243	1.233	1.204	1.188	1.2351
	EFF-AD	0.740	0.886	0.967	0.960	0.888	0.731	0.652	0.8969
	EFF-POLY	0.746	0.889	0.967	0.960	0.891	0.737	0.660	0.8970
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.471	18.017	18.465	18.270	18.126	17.698	17.456	18.141
	T-TOTAL	554.49	554.07	555.04	553.43	554.69	557.29	558.90	554.79
	P-STATIC	15.229	15.294	15.436	15.584	15.701	15.806	15.863	
	BETABAR	59.898	51.333	48.051	47.181	49.431	57.076	63.419	
	EPSILON	-0.113	-1.483	-2.840	-4.187	-5.453	-6.843	-7.979	
	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
	V-BAR	506.353	551.623	576.853	543.486	517.602	461.098	425.492	
	VZ-BAR	253.958	344.724	385.608	369.402	336.638	250.757	190.392	
	V-THET-BAR	438.062	430.459	429.029	398.646	393.157	386.745	380.519	
	MACH-BAR	0.447	0.489	0.512	0.482	0.458	0.405	0.372	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	17.083	17.642	18.016	17.833	17.592	17.410	17.188	17.697
ROTOR PLUS STATOR	T-TOTAL	554.49	554.07	555.03	553.49	554.30	556.85	558.90	554.79
----------	P-STATIC	16.473	16.479	16.479	16.461	16.440	16.419	16.407	
PR = 1.2049	BETABAR	17.799	16.148	13.795	12.868	12.864	12.989	12.482	
TR = 1.0696	EPSILON	0.450	-0.291	-1.207	-1.850	-2.385	-3.812	-5.489	
EFF-A = 0.7861	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.7917	V-BAR	262.580	357.873	409.579	387.706	357.261	333.266	297.514	
	VZ-BAR	250.012	343.780	397.763	377.969	348.295	324.738	290.482	
	V-THET-BAR	80.263	99.412	97.662	86.348	79.539	74.909	64.302	
IGV,ROTOR,STATOR	MACH-BAR	0.229	0.313	0.359	0.340	0.313	0.290	0.258	
----------	EFF-POLY	0.777	0.779	0.726	0.689	0.625	0.736	0.684	
PR = 1.2043	INCID-M	4.2	-1.3	-2.8	-3.3	-2.1	3.4	8.6	
TR = 1.0696	DEVIATION	17.0	14.8	12.9	12.5	13.5	15.0	15.4	
EFF-A = 0.7866	OMEGA-BAR	0.173	0.138	0.148	0.163	0.220	0.152	0.169	
EFF-P = 0.7896	LOSS PAR	0.058	0.048	0.055	0.063	0.089	0.068	0.073	
	D-FACTOR	0.732	0.571	0.510	0.521	0.567	0.583	0.634	
	TURNING	42.1	35.2	34.3	34.3	36.6	44.1	50.9	

Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units

(Data Point No. 61)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG	
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979		
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694	
WCOR= 3.363	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70	
NCOR=34212.0	P-STATIC	13.536	13.537	13.543	13.555	13.573	13.598	13.613		
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
	EPSILON	-0.000	-0.854	-2.439	-4.096	-5.717	-7.226	-8.067		
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970		
	V-BAR	380.091	379.947	378.996	376.984	373.839	369.611	366.972		
	VZ-BAR	380.091	379.947	378.996	376.984	373.839	369.611	366.972		
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000		
	MACH-BAR	0.344	0.344	0.343	0.341	0.339	0.335	0.332		
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848		
	P-TOTAL	14.443	14.466	14.524	14.597	14.593	14.572	14.560	14.554	
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70	
	P-STATIC	12.838	12.850	12.880	12.914	12.948	12.982	12.999		
	BETABAR	18.431	19.567	20.213	20.253	20.071	15.687	5.729		
	EPSILON	-0.000	-0.843	-2.417	-4.043	-5.683	-7.238	-8.118		
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950		
	V-BAR	454.144	455.437	458.592	462.984	457.507	449.768	445.818		
	VZ-BAR	430.848	429.133	430.349	434.300	429.721	432.915	443.592		
	V-THET-BAR	143.586	152.526	158.447	160.265	157.011	121.600	44.500		
	MACH-BAR	0.414	0.415	0.418	0.422	0.417	0.409	0.406		
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6		
	DEVIATION	-4.6	-4.2	-4.9	-6.3	-7.8	-13.6	-24.2		
	OMEGABAR	0.217	0.197	0.148	0.085	0.091	0.112	0.124		
	TURNING	-18.4	-19.6	-20.2	-20.3	-20.1	-15.7	-5.7		
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517		
	P-TOTAL	14.443	14.466	14.526	14.598	14.592	14.572	14.560	14.554	
WCOR= 3.395	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70	
NCOR=34212.0	P-STATIC	11.826	11.842	11.885	11.885	11.904	11.916	11.913		
	BETABAR	14.119	15.136	15.850	16.073	15.950	12.390	4.552		
	EPSILON	-1.170	-1.706	-3.125	-4.554	-5.737	-6.363	-6.637		
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950		
	V-BAR	588.152	588.543	591.589	596.245	593.423	590.006	589.251		
	VZ-BAR	570.385	568.122	569.098	572.937	570.577	576.190	587.393		
	V-THET-BAR	143.472	153.676	161.572	165.077	163.072	126.576	46.760		
	MACH-BAR	0.542	0.542	0.545	0.550	0.547	0.544	0.543		
	U-WHEEL	749.676	771.990	816.625	861.259	905.893	950.527	972.844		
	V-BAR-PR	832.360	839.692	867.741	901.630	936.673	1005.450	1096.659		
	BETABAR-PR	40.744	47.422	49.016	50.546	52.470	55.030	57.614		
	V-THET-B-P	-606.205	-618.315	-655.053	-696.182	-742.821	-823.950	-926.084		
	MACH-BAR-P	0.767	0.774	0.800	0.831	0.863	0.927	1.011		
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419		
	P-TOTAL	19.455	20.253	20.946	20.901	20.597	20.147	19.866	20.558	
ROTOR	T-TOTAL	576.28	575.97	577.65	576.43	579.76	581.54	583.04	578.37	
-----	P-STATIC	13.591	13.733	14.070	14.373	14.647	14.925	15.059		
PR = 1.4126	BETABAR	48.176	45.329	44.364	43.451	45.827	44.285	38.117		
TR = 1.1150	EPSILON	-2.885	-2.399	-3.212	-4.466	-5.575	-6.246	-6.418		
EFF-A = 0.9036	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870		
EFF-P = 0.9063	V-BAR	821.156	852.577	863.560	838.196	803.968	757.535	730.035		
	VZ-BAR	547.579	599.406	617.792	608.505	560.239	542.256	574.353		
	V-THET-BAR	611.927	606.265	603.379	576.446	576.612	528.933	450.632		
	MACH-BAR	0.734	0.766	0.776	0.751	0.715	0.669	0.642		
	U-WHEEL	740.869	762.601	806.071	849.541	893.010	936.480	958.215		
	V-BAR-PR	562.555	619.470	650.236	667.018	643.442	678.383	766.499		
	BETABAR-PR	13.250	14.613	18.162	24.171	29.459	36.919	41.469		
	V-THET-B-P	-128.942	-156.336	-202.692	-273.094	-316.399	-407.547	-507.582		
	MACH-BAR-P	0.503	0.557	0.584	0.598	0.572	0.599	0.674		
	D-FACTOR	0.519	0.454	0.442	0.441	0.497	0.502	0.465		
	TURNING	33.5	32.8	30.9	26.4	23.0	18.1	16.1		
	INCID-M	-10.6	-8.7	-6.3	-5.0	-4.4	-3.6	-2.2		
	DEVIATION	25.1	18.4	9.6	6.5	4.3	5.7	7.6		
	OMEGABAR-P	0.209	0.090	0.031	0.028	0.111	0.169	0.193		
	LOSS PAR	0.071	0.031	0.011	0.010	0.041	0.059	0.065		
	PT-RATIO	1.347	1.400	1.442	1.432	1.412	1.383	1.364	1.4126	
	EFF-AD	0.801	0.914	0.970	0.970	0.880	0.801	0.749	0.9036	
	EFF-POLY	0.809	0.918	0.971	0.971	0.885	0.810	0.759	0.9063	
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373		
	P-TOTAL	19.455	20.239	20.941	20.906	20.605	20.150	19.866	20.558	
	T-TOTAL	576.28	575.96	577.66	576.41	579.69	581.53	583.02	578.37	
	P-STATIC	13.598	13.680	13.878	14.130	14.386	14.661	14.779		
	BETABAR	46.311	45.206	43.618	42.515	44.664	43.166	37.047		
	EPSILON	-0.113	-1.204	-2.792	-3.895	-5.383	-7.126	-7.979		
	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870		
	V-BAR	820.589	855.778	877.281	856.285	824.175	778.940	753.383		
	VZ-BAR	545.759	602.970	635.112	631.168	586.193	568.089	601.311		
	V-THET-BAR	612.791	607.224	605.184	578.662	579.330	532.886	453.885		
	MACH-BAR	0.734	0.769	0.790	0.769	0.735	0.689	0.664		
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226		
	P-TOTAL	18.938	19.666	20.349	20.335	20.093	19.478	19.043	19.974	
ROTOR PLUS STATOR	T-TOTAL	576.28	575.96	577.66	576.41	579.69	581.58	583.02	578.37	
-----	P-STATIC	16.828	16.833	16.817	16.772	16.710	16.629	16.583		
PR = 1.3725	BETABAR	8.610	8.278	8.015	8.520	8.909	8.840	8.240		
TR = 1.1150	EPSILON	0.450	-0.226	-1.398	-2.528	-3.725	-5.036	-5.489		
EFF-A = 0.8229	K-BAR	0.925	0.925	0.925	0.925	0.925	0.925	0.925		
EFF-P = 0.8307	V-BAR	479.327	548.196	606.555	608.955	597.787	555.562	521.006		
	VZ-BAR	476.925	542.488	600.630	602.235	590.575	548.962	515.627		
	V-THET-BAR	71.762	78.903	84.572	90.213	92.579	85.378	74.670		
IGV,ROTOR,STATOR	MACH-BAR	0.414	0.476	0.529	0.532	0.520	0.481	0.449		
-----	EFF-POLY	0.886	0.876	0.868	0.859	0.854	0.784	0.730		
PR = 1.3593	INCID-M	-7.3	-7.4	-7.2	-8.0	-6.8	-10.5	-17.7		
TR = 1.1150	DEVIATION	7.8	7.0	7.1	8.2	9.5	10.8	11.2		
EFF-A = 0.7986	OMEGA-BAR	0.088	0.087	0.084	0.084	0.082	0.122	0.162		
EFF-P = 0.8054	LOSS PAR	0.031	0.031	0.032	0.033	0.034	0.052	0.071		
	U-FACTOR	0.650	0.584	0.536	0.518	0.523	0.537	0.534		
	TURNING	39.7	36.9	35.6	34.0	35.8	34.3	28.8		

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Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 62)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.261	I-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34205.0	P-STATIC	13.659	13.659	13.664	13.675	13.691	13.713	13.727	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.849	-2.456	-4.101	-5.696	-7.203	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	358.882	358.742	357.867	355.986	353.027	349.084	346.596	
	VZ-BAR	358.882	358.742	357.867	355.986	353.027	349.084	346.596	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.325	0.325	0.324	0.322	0.319	0.316	0.313	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.475	14.491	14.543	14.611	14.606	14.587	14.577	14.570
	I-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	12.976	12.987	13.014	13.045	13.076	13.109	13.125	
	BETABAR	18.036	19.179	19.951	20.318	20.288	15.832	4.142	
	EPSILON	-0.000	-0.820	-2.412	-4.032	-5.656	-7.214	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	437.833	438.350	441.275	445.567	440.306	432.822	428.992	
	VZ-BAR	416.321	414.017	414.792	417.845	412.992	416.272	427.871	
	V-THET-BAR	135.556	144.004	150.568	154.712	152.667	118.065	30.984	
	MACH-BAR	0.398	0.399	0.401	0.405	0.401	0.394	0.390	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-5.0	-4.6	-5.2	-6.2	-7.6	-13.4	-25.8	
	OMEGABAR	0.211	0.196	0.147	0.082	0.088	0.109	0.122	
	TURNING	-18.0	-19.2	-20.0	-20.3	-20.3	-15.8	-4.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.475	14.492	14.545	14.611	14.606	14.587	14.577	14.570
WCOR= 3.289	I-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34205.0	P-STATIC	12.057	12.074	12.091	12.107	12.126	12.138	12.135	
	BETABAR	13.918	14.931	15.738	16.211	16.214	12.568	3.310	
	EPSILON	-1.170	-1.678	-3.206	-4.702	-5.919	-6.576	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	563.137	562.900	566.092	570.818	568.035	564.632	563.933	
	VZ-BAR	546.606	543.891	544.871	548.121	545.442	551.003	562.992	
	V-THET-BAR	135.448	145.034	153.543	159.362	158.611	122.843	32.558	
	MACH-BAR	0.518	0.517	0.520	0.525	0.522	0.519	0.518	
	U-WHEEL	749.523	771.833	816.458	861.083	905.708	950.333	972.645	
	V-BAR-PR	822.110	829.880	858.107	890.426	925.025	994.176	1095.776	
	BETABAR-PR	48.327	49.050	50.581	52.006	53.867	56.336	59.084	
	V-THET-B-P	-614.075	-626.799	-662.914	-701.721	-747.097	-827.489	-940.087	
	MACH-BAR-P	0.756	0.763	0.789	0.819	0.851	0.914	1.007	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.043	20.864	21.375	21.447	21.296	20.971	20.101	21.171
ROTOR	I-TOTAL	579.91	579.48	580.18	580.24	583.44	586.95	588.88	582.15
	P-STATIC	14.440	14.624	14.971	15.296	15.582	15.880	16.006	
PR = 1.4530	BETABAR	53.364	49.711	48.444	48.298	50.578	49.402	45.119	
TR = 1.1223	EPSILON	-2.885	-2.315	-2.979	-4.373	-5.538	-6.293	-6.418	
EFF-A = 0.9235	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.9250	V-BAR	789.289	819.822	821.148	801.039	773.656	733.841	667.635	
	VZ-BAR	470.988	530.143	544.709	542.902	491.295	477.533	471.104	
	V-THET-BAR	633.361	625.290	614.471	598.060	597.631	557.204	473.072	
	MACH-BAR	0.701	0.731	0.732	0.712	0.683	0.643	0.580	
	U-WHEEL	740.717	762.445	805.906	849.366	892.828	936.289	958.019	
	V-BAR-PR	483.068	547.615	577.413	589.218	573.176	609.728	676.101	
	BETABAR-PR	12.841	14.496	19.362	25.248	31.001	38.441	45.830	
	V-THET-B-P	-107.356	-137.156	-191.435	-251.307	-295.197	-379.084	-484.946	
	MACH-BAR-P	0.429	0.488	0.514	0.524	0.506	0.534	0.587	
	D-FACTOR	0.623	0.546	0.529	0.534	0.578	0.581	0.562	
	TURNING	35.5	34.6	31.2	26.8	22.9	17.9	13.3	
	INCID-M	-9.1	-7.1	-4.7	-3.5	-3.0	-2.3	-0.7	
	DEVIATION	24.7	18.2	10.8	7.6	5.8	7.2	12.0	
	OMEGABAR-P	0.198	0.071	0.021	0.024	0.088	0.157	0.239	
	LOSS PAR	0.068	0.025	0.008	0.009	0.032	0.054	0.075	
	PT-RATIO	1.385	1.440	1.469	1.468	1.458	1.438	1.379	1.4530
	EFF-AD	0.826	0.937	0.981	0.977	0.912	0.831	0.711	0.9235
	EFF-POLY	0.834	0.940	0.981	0.978	0.916	0.839	0.724	0.9250
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.043	20.845	21.369	21.446	21.300	20.981	20.101	21.171
	I-TOTAL	579.91	579.48	580.18	580.20	583.34	586.91	588.88	582.15
	P-STATIC	14.450	14.577	14.851	15.128	15.381	15.655	15.780	
	BETABAR	53.547	49.614	47.956	47.544	49.521	48.313	43.874	
	EPSILON	-0.115	-0.723	-2.243	-3.696	-5.175	-6.850	-7.979	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	788.540	822.294	829.594	813.418	788.978	752.237	687.501	
	VZ-BAR	468.523	532.809	555.583	549.080	512.188	500.256	495.599	
	V-THET-BAR	634.256	626.250	616.077	600.132	600.111	561.770	476.487	
	MACH-BAR	0.700	0.733	0.740	0.724	0.698	0.660	0.598	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	19.326	20.123	20.846	21.001	20.875	20.458	19.403	20.649
ROTOR PLUS STATOR	I-TOTAL	579.91	579.48	580.16	580.12	583.15	586.86	588.88	582.15
	P-STATIC	17.698	17.706	17.701	17.668	17.617	17.546	17.498	
PR = 1.4172	BETABAR	9.165	8.782	8.071	8.837	9.508	8.225	7.608	
TR = 1.1223	EPSILON	0.450	-0.073	-1.062	-2.118	-3.346	-4.803	-5.489	
EFF-A = 0.8563	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8632	V-BAR	416.031	499.472	564.126	579.428	575.779	550.047	453.701	
	VZ-BAR	410.720	493.621	558.538	572.549	567.868	544.385	449.708	
	V-THET-BAR	66.267	76.218	79.207	89.010	95.114	78.708	60.069	
IGV,ROTOR,STATOR	MACH-BAR	0.357	0.431	0.489	0.503	0.498	0.473	0.387	
	EFF-POLY	0.846	0.845	0.875	0.881	0.875	0.819	0.744	
PR = 1.4052	INCID-M	-2.1	-3.0	-2.9	-3.0	-2.0	-5.3	-10.9	
TR = 1.1223	DEVIATION	8.4	7.5	7.2	8.5	10.1	10.2	10.5	
EFF-A = 0.8366	OMEGA-BAR	0.128	0.115	0.080	0.071	0.072	0.098	0.162	
EFF-P = 0.8422	LOSS PAR	0.045	0.041	0.030	0.028	0.029	0.042	0.071	
	D-FACTOR	0.728	0.636	0.568	0.540	0.539	0.552	0.612	
	TURNING	44.4	40.8	39.9	38.7	40.0	40.1	36.3	

Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 63)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.184	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34210.0	P-STATIC	13.711	13.711	13.716	13.726	13.742	13.762	13.775	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.849	-2.456	-4.110	-5.708	-7.203	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	349.505	349.376	348.511	346.676	343.804	339.967	337.549	
	VZ-BAR	349.505	349.376	348.511	346.676	343.804	339.967	337.549	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.316	0.316	0.315	0.313	0.311	0.307	0.305	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.497	14.509	14.556	14.619	14.614	14.597	14.587	14.582
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.073	13.083	13.109	13.139	13.167	13.198	13.213	
	BETABAR	18.455	19.265	20.003	20.076	20.252	16.022	4.134	
	EPSILON	-0.000	-0.820	-2.412	-4.033	-5.669	-7.214	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	425.993	426.025	428.542	432.726	427.675	420.463	416.744	
	VZ-BAR	404.085	402.166	402.691	406.434	401.235	404.002	415.660	
	V-THET-BAR	134.853	140.563	146.591	148.537	148.040	116.035	30.042	
	MACH-BAR	0.387	0.387	0.390	0.393	0.389	0.382	0.378	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-4.6	-4.5	-5.1	-6.4	-7.6	-13.2	-25.8	
	OMEGABAR	0.201	0.189	0.142	0.078	0.084	0.105	0.117	
	TURNING	-18.5	-19.3	-20.0	-20.1	-20.3	-16.0	-4.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.477	14.509	14.557	14.620	14.614	14.597	14.587	14.582
WCOR= 3.209	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34210.0	P-STATIC	12.216	12.230	12.248	12.264	12.281	12.294	12.291	
	BETABAR	14.302	15.055	15.835	16.080	16.253	12.774	3.318	
	EPSILON	-1.170	-1.645	-3.112	-4.636	-5.970	-6.666	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	545.444	544.919	547.731	552.386	549.615	546.163	545.466	
	VZ-BAR	528.539	526.214	526.945	530.776	527.649	532.548	544.552	
	V-THET-BAR	134.765	141.539	149.460	152.995	153.827	120.738	31.568	
	MACH-BAR	0.500	0.500	0.503	0.507	0.505	0.501	0.501	
	U-WHEEL	749.632	771.946	816.577	861.209	905.840	950.472	972.787	
	V-BAR-PR	810.826	821.170	850.131	885.041	918.666	985.953	1087.396	
	BETABAR-PR	49.319	50.147	51.694	53.149	54.944	57.302	59.948	
	V-THET-B-P	-614.887	-630.406	-667.117	-708.214	-752.013	-829.734	-941.219	
	MACH-BAR-P	0.744	0.753	0.780	0.813	0.843	0.905	0.998	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.263	21.022	21.453	21.661	21.535	21.144	20.307	21.350
ROTOR	T-TOTAL	581.51	580.98	581.56	581.27	584.65	588.40	590.70	583.45
	P-STATIC	14.860	15.032	15.405	15.754	16.067	16.370	16.497	
PR = 1.4641	BETABAR	57.012	52.501	51.345	50.198	53.191	52.946	49.103	
TR = 1.1248	EPSILON	-2.885	-2.211	-3.039	-4.345	-5.640	-6.282	-6.418	
EFF-A = 0.9244	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.9260	V-BAR	769.651	798.583	794.243	779.305	750.957	706.027	639.574	
	VZ-BAR	419.050	486.142	496.101	498.861	449.941	425.429	418.732	
	V-THET-BAR	645.569	633.491	620.243	598.709	601.229	563.456	483.444	
	MACH-BAR	0.680	0.709	0.704	0.690	0.661	0.616	0.553	
	U-WHEEL	740.825	762.556	806.024	849.491	892.958	936.426	958.159	
	V-BAR-PR	429.740	503.009	529.797	558.381	536.253	565.776	633.001	
	BETABAR-PR	12.807	14.855	20.525	26.689	32.960	41.240	48.585	
	V-THET-B-P	-95.256	-129.065	-185.780	-250.782	-291.729	-372.969	-474.715	
	MACH-BAR-P	0.380	0.447	0.470	0.494	0.472	0.493	0.547	
	D-FACTOR	0.689	0.601	0.585	0.569	0.619	0.627	0.603	
	TURNING	36.5	35.3	31.2	26.5	22.0	16.1	11.4	
	INCID-M	-8.1	-6.0	-3.6	-2.4	-1.9	-1.3	0.2	
	DEVIATION	24.7	18.6	11.9	9.0	7.8	10.0	14.7	
	OMEGABAR-P	0.204	0.081	0.037	0.015	0.080	0.161	0.245	
	LOSS PAR	0.070	0.028	0.013	0.006	0.028	0.053	0.073	
	PT-RATIO	1.398	1.449	1.474	1.481	1.474	1.449	1.392	1.4641
	EFF-AD	0.829	0.931	0.967	0.985	0.922	0.832	0.714	0.9244
	EFF-POLY	0.837	0.934	0.968	0.986	0.926	0.840	0.727	0.9260
STATOR LEADING EDGE	DIAMETER	4.956	5.096	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.263	21.006	21.447	21.659	21.541	21.158	20.307	21.350
	T-TOTAL	581.51	580.98	581.56	581.24	584.55	588.34	590.70	583.45
	P-STATIC	14.876	15.015	15.387	15.600	15.876	16.161	16.286	
	BETABAR	57.286	52.593	50.935	49.464	52.040	51.746	47.690	
	EPSILON	-0.113	-0.973	-2.309	-3.622	-5.162	-6.866	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	768.356	798.991	801.159	790.539	765.657	723.612	658.452	
	VZ-BAR	415.251	485.373	504.886	513.795	470.969	448.008	443.232	
	V-THET-BAR	646.481	634.575	622.045	600.804	603.650	568.238	486.934	
	MACH-BAR	0.679	0.709	0.711	0.701	0.675	0.632	0.570	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	19.590	20.302	20.987	21.176	20.954	20.576	19.604	20.789
ROTOR PLUS STATOR	T-TOTAL	581.51	580.98	581.57	581.17	584.33	588.27	590.70	583.45
	P-STATIC	18.018	18.025	18.018	17.985	17.935	17.869	17.826	
PR = 1.4257	BETABAR	10.904	9.581	8.060	8.707	9.725	9.541	9.669	
TR = 1.1248	EPSILON	0.450	-0.140	-1.173	-2.275	-3.331	-4.735	-5.489	
EFF-A = 0.8543	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8614	V-BAR	406.228	482.532	545.833	564.185	552.444	528.274	436.175	
	VZ-BAR	198.894	475.810	540.441	557.681	544.506	520.966	429.979	
	V-THET-BAR	76.843	80.211	76.530	85.407	93.313	87.565	73.257	
IGV,ROTOR,STATOR	MACH-BAR	0.348	0.415	0.472	0.489	0.477	0.453	0.371	
	EFF-POLY	0.849	0.841	0.881	0.863	0.821	0.784	0.718	
PR = 1.4148	INCID-M	1.6	-0.1	0.1	-1.0	0.5	-1.9	-7.1	
TR = 1.1248	DEVIATION	10.1	8.3	7.2	8.3	10.4	11.5	12.6	
EFF-A = 0.8371	OMEGA-BAR	0.125	0.118	0.075	0.080	0.104	0.116	0.175	
EFF-P = 0.8427	LOSS PAR	0.044	0.042	0.028	0.031	0.042	0.050	0.076	
	D-FACTOR	0.734	0.648	0.579	0.548	0.558	0.563	0.619	
	TURNING	46.4	43.0	42.9	40.8	42.3	42.2	38.0	

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Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 64)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.110	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34185.0	P-STATIC	13.780	13.781	13.785	13.794	13.809	13.828	13.840	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.832	-2.454	-4.083	-5.693	-7.192	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	336.617	336.501	335.679	333.975	331.239	327.580	325.244	
	VZ-BAR	336.617	336.501	335.679	333.975	331.239	327.580	325.244	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.000	0.000	0.000	
	MACH-BAR	0.304	0.304	0.303	0.302	0.299	0.296	0.294	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.517	14.526	14.567	14.627	14.622	14.606	14.596	14.592
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.194	13.204	13.228	13.256	13.284	13.312	13.326	
	BETABAR	18.778	19.360	19.881	20.239	20.205	16.188	4.898	
	EPSILON	-0.000	-0.812	-2.402	-4.002	-5.656	-7.183	-8.118	
	K-BAR	0.960	0.960	0.960	0.960	0.959	0.959	0.960	
	V-BAR	409.627	409.310	411.413	415.592	410.582	403.655	400.043	
	VZ-BAR	387.824	386.165	386.894	389.933	385.316	387.541	398.583	
	V-THET-BAR	131.858	135.684	139.906	143.767	141.806	112.520	34.153	
	MACH-BAR	0.372	0.372	0.374	0.377	0.373	0.366	0.363	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-4.3	-4.4	-5.3	-6.3	-7.7	-13.1	-25.0	
	OMEGABAR	0.194	0.184	0.140	0.075	0.082	0.102	0.115	
	TURNING	-18.8	-19.4	-19.9	-20.2	-20.2	-16.2	-4.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.517	14.526	14.568	14.627	14.622	14.605	14.596	14.592
WCOR= 3.151	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34185.0	P-STATIC	12.415	12.428	12.444	12.461	12.480	12.495	12.493	
	BETABAR	14.623	15.194	15.807	16.280	16.298	12.986	3.953	
	EPSILON	-1.170	-1.672	-3.372	-5.081	-6.522	-6.904	-6.637	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	521.899	521.180	523.761	528.188	525.010	521.290	520.545	
	VZ-BAR	504.995	502.960	503.955	507.009	503.913	507.873	519.306	
	V-THET-BAR	131.753	136.598	142.671	148.072	147.332	117.126	35.888	
	MACH-BAR	0.478	0.477	0.480	0.484	0.481	0.477	0.477	
	U-WHEEL	749.084	771.382	815.980	860.580	905.178	949.777	972.076	
	V-BAR-PR	797.570	809.894	841.025	874.490	910.093	975.332	1070.573	
	BETABAR-PR	50.716	51.608	53.185	54.564	56.378	58.615	60.983	
	V-THET-B-P	-617.331	-634.784	-673.309	-712.508	-757.846	-832.651	-936.188	
	MACH-BAR-P	0.730	0.742	0.770	0.801	0.834	0.893	0.980	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.454	21.128	21.562	21.623	21.430	20.939	20.483	21.334
ROTOR	T-TOTAL	582.71	582.08	582.49	581.87	585.03	588.92	591.84	584.08
	P-STATIC	15.092	15.280	15.654	15.998	16.293	16.579	16.705	
PR = 1.4621	BETABAR	58.785	54.200	52.593	52.078	55.297	56.175	51.335	
TR = 1.1261	EPSILON	-2.885	-2.104	-3.043	-4.655	-6.084	-6.486	-6.418	
EFF-A = 0.9121	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9142	V-BAR	763.142	786.369	782.163	759.328	727.542	675.638	634.349	
	VZ-BAR	395.497	459.989	475.142	466.677	414.224	376.038	396.319	
	V-THET-BAR	652.661	637.726	621.303	598.992	598.075	561.287	495.308	
	MACH-BAR	0.673	0.696	0.692	0.670	0.638	0.587	0.548	
	U-WHEEL	740.284	761.999	805.435	848.870	892.305	935.741	957.458	
	V-BAR-PR	405.087	476.511	509.618	529.367	508.151	530.723	608.812	
	BETABAR-PR	12.492	15.103	21.180	28.166	35.494	44.866	49.385	
	V-THET-B-P	-87.623	-124.273	-184.132	-249.878	-294.231	-374.454	-462.151	
	MACH-BAR-P	0.357	0.422	0.451	0.467	0.446	0.461	0.526	
	D-FACTOR	0.719	0.632	0.609	0.600	0.648	0.661	0.622	
	TURNING	38.2	36.5	32.0	26.4	21.0	13.7	11.6	
	INCID-M	-6.7	-4.5	-2.1	-1.0	-0.5	-0.0	1.2	
	DEVIATION	24.4	18.8	12.6	10.5	10.2	13.6	15.5	
	OMEGABAR-P	0.207	0.092	0.042	0.032	0.101	0.193	0.248	
	LOSS PAR	0.071	0.032	0.015	0.011	0.035	0.060	0.072	
	PT-RATIO	1.409	1.454	1.480	1.478	1.466	1.434	1.403	1.4621
	EFF-AD	0.834	0.925	0.963	0.970	0.903	0.801	0.721	0.9141
	EFF-POLY	0.842	0.929	0.965	0.971	0.908	0.811	0.734	0.9142
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.454	21.114	21.558	21.625	21.440	20.950	20.483	21.334
	T-TOTAL	582.71	582.09	582.49	581.86	584.93	588.85	591.84	584.08
	P-STATIC	15.101	15.251	15.565	15.870	16.142	16.411	16.537	
	BETABAR	59.009	54.210	52.196	51.431	54.270	55.093	50.198	
	EPSILON	-0.113	-1.278	-2.571	-3.624	-4.901	-6.770	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	762.419	787.758	788.541	769.020	739.816	690.385	649.366	
	VZ-BAR	392.570	460.692	483.342	479.449	432.034	395.037	415.683	
	V-THET-BAR	653.583	638.910	623.038	601.264	600.544	566.178	498.883	
	MACH-BAR	0.673	0.698	0.698	0.680	0.650	0.601	0.561	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	19.826	20.432	21.101	21.164	20.878	20.483	19.785	20.805
ROTOR PLUS STATOR	T-TOTAL	582.71	582.10	582.50	581.83	584.58	588.68	591.84	584.08
	P-STATIC	18.220	18.226	18.220	18.188	18.142	18.086	18.049	
PR = 1.4258	BETABAR	10.581	9.853	8.365	8.651	9.489	9.482	9.162	
TR = 1.1261	EPSILON	0.450	-0.101	-0.983	-1.969	-3.030	-4.658	-5.489	
EFF-A = 0.8462	K-BAR	0.915	0.915	0.915	0.915	0.915	0.915	0.915	
EFF-P = 0.8537	V-BAR	408.609	473.690	536.093	544.184	525.572	497.098	429.119	
	VZ-BAR	401.662	466.711	530.389	537.992	518.381	490.306	423.645	
	V-THET-BAR	75.029	80.991	77.989	81.854	86.638	81.896	68.323	
IGV,ROTOR,STATOR	MACH-BAR	0.349	0.407	0.463	0.470	0.452	0.425	0.365	
	EFF-POLY	0.856	0.843	0.879	0.863	0.825	0.817	0.715	
PR = 1.4158	INCID-M	3.3	1.0	1.4	0.9	2.8	1.5	-4.6	
TR = 1.1261	DEVIATION	9.8	8.5	7.5	8.3	10.1	11.5	12.1	
EFF-A = 0.8311	OMEGA-BAR	0.117	0.116	0.076	0.080	0.106	0.103	0.177	
EFF-P = 0.8368	LOSS PAR	0.041	0.042	0.029	0.031	0.043	0.044	0.077	
	D-FACTOR	0.733	0.656	0.585	0.564	0.581	0.590	0.637	
	TURNING	48.4	44.4	43.8	42.8	44.8	45.6	41.0	

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Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 65)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.002	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34218.0	P-STATIC	13.847	13.847	13.851	13.860	13.874	13.891	13.902	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.859	-2.467	-4.110	-5.699	-7.191	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	323.873	323.765	322.958	321.267	318.621	315.088	312.828	
	VZ-BAR	323.873	323.765	322.958	321.267	318.621	315.088	312.828	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.000	0.001	0.000	
	MACH-BAR	0.292	0.292	0.292	0.290	0.288	0.284	0.282	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.543	14.549	14.582	14.636	14.631	14.617	14.608	14.605
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.370	13.379	13.401	13.425	13.451	13.476	13.486	
	BETABAR	18.306	19.231	20.078	20.415	20.346	16.359	5.199	
	EPSILON	-0.000	-0.822	-2.404	-4.034	-5.642	-7.183	-8.118	
	K-BAR	0.980	0.980	0.980	0.980	0.979	0.979	0.980	
	V-BAR	384.509	383.950	385.448	389.674	384.671	378.179	375.034	
	VZ-BAR	365.051	362.522	362.022	365.198	360.671	362.770	373.491	
	V-THET-BAR	120.768	126.464	132.326	135.926	133.746	106.499	33.983	
	MACH-BAR	0.348	0.348	0.349	0.353	0.349	0.343	0.340	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-4.8	-4.5	-5.1	-6.1	-7.5	-12.9	-24.7	
	OMEGABAR	0.179	0.172	0.134	0.070	0.077	0.097	0.109	
	TURNING	-18.3	-19.2	-20.1	-20.4	-20.3	-16.4	-5.2	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.543	14.549	14.583	14.637	14.631	14.617	14.608	14.605
WCOR= 3.020	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34218.0	P-STATIC	12.694	12.705	12.720	12.740	12.764	12.779	12.777	
	BETABAR	14.338	15.178	16.040	16.524	16.534	13.233	4.234	
	EPSILON	-1.170	-1.834	-3.835	-5.853	-7.524	-7.186	-6.637	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	487.293	486.478	488.450	492.226	488.293	484.407	483.648	
	VZ-BAR	472.115	469.505	469.435	471.898	468.103	471.469	482.328	
	V-THET-BAR	120.672	127.371	134.959	139.996	138.962	110.869	35.709	
	MACH-BAR	0.445	0.444	0.446	0.450	0.446	0.442	0.441	
	U-WHEEL	749.808	772.126	816.768	861.410	906.052	950.694	973.015	
	W-BAR-PR	786.578	797.591	827.791	862.052	898.641	963.126	1054.126	
	BETABAR-PR	53.115	53.938	55.451	56.809	58.606	60.687	62.770	
	V-THET-B-P	-629.135	-644.755	-681.808	-721.414	-767.089	-839.825	-937.306	
	MACH-BAR-P	0.718	0.728	0.756	0.787	0.821	0.879	0.962	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.660	21.419	21.829	21.695	21.219	20.729	20.763	21.406
ROTOR	T-TOTAL	584.00	583.41	583.53	582.25	585.06	589.46	592.98	584.60
	P-STATIC	15.280	15.466	15.853	16.185	16.472	16.745	16.873	
PR = 1.4657	BETABAR	58.848	54.057	52.640	52.438	57.436	59.264	51.605	
TR = 1.1270	EPSILON	-2.885	-2.113	-3.424	-5.327	-6.757	-6.622	-6.418	
EFF-A = 0.9113	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9133	V-BAR	761.184	789.063	782.523	749.467	700.387	647.187	640.309	
	VZ-BAR	393.767	463.166	474.848	456.897	377.008	330.649	397.679	
	V-THET-BAR	651.420	638.767	621.981	594.083	590.171	556.194	501.843	
	MACH-BAR	0.671	0.698	0.692	0.661	0.612	0.561	0.552	
	U-WHEEL	740.999	762.735	806.212	849.689	893.167	936.644	958.383	
	W-BAR-PR	403.828	479.485	509.347	523.602	483.796	504.059	605.456	
	BETABAR-PR	12.816	14.974	21.204	29.227	38.806	48.998	48.942	
	V-THET-B-P	-89.578	-123.967	-184.231	-255.607	-302.997	-380.449	-456.540	
	MACH-BAR-P	0.356	0.424	0.450	0.462	0.423	0.437	0.522	
	D-FACTOR	0.721	0.628	0.607	0.604	0.672	0.686	0.622	
	TURNING	40.3	39.0	34.2	27.6	19.8	11.7	13.8	
	INCID-M	-4.3	-2.2	0.2	1.3	1.7	2.0	3.0	
	DEVIATION	24.7	18.7	12.6	11.6	13.6	17.8	15.1	
	OMEGABAR-P	0.211	0.081	0.029	0.032	0.129	0.227	0.242	
	LOSS PAR	0.072	0.028	0.010	0.011	0.042	0.066	0.071	
	PT-RATIO	1.421	1.472	1.496	1.482	1.451	1.418	1.421	1.4657
	EFF-AD	0.838	0.937	0.976	0.971	0.877	0.770	0.738	0.9113
	EFF-POLY	0.846	0.940	0.977	0.972	0.883	0.781	0.751	0.9133
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.660	21.403	21.828	21.708	21.237	20.730	20.763	21.406
	T-TOTAL	584.00	583.42	583.55	582.22	584.95	589.39	592.98	584.60
	P-STATIC	15.291	15.439	15.770	16.081	16.349	16.611	16.732	
	BETABAR	59.091	54.090	52.291	51.875	56.430	58.301	50.748	
	EPSILON	-0.113	-1.461	-2.888	-4.302	-5.435	-7.226	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	760.321	790.188	788.527	758.042	711.294	658.934	652.744	
	VZ-BAR	390.562	463.466	482.305	468.013	393.348	346.144	413.013	
	V-THET-BAR	652.341	639.916	623.824	596.307	592.534	560.572	505.465	
	MACH-BAR	0.670	0.699	0.697	0.669	0.623	0.571	0.564	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	20.090	20.736	21.286	21.086	20.707	20.247	20.160	20.813
ROTOR PLUS STATOR	T-TOTAL	584.00	583.43	583.55	582.20	584.37	589.21	592.98	584.60
	P-STATIC	18.424	18.424	18.407	18.372	18.328	18.282	18.255	
PR = 1.4251	BETABAR	9.720	9.394	8.644	8.393	8.415	8.189	7.472	
TR = 1.1270	EPSILON	0.450	-0.071	-0.838	-1.623	-2.541	-4.632	-5.489	
EFF-A = 0.8384	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8462	V-BAR	414.004	482.189	533.956	519.606	490.440	451.005	446.344	
	VZ-BAR	408.060	475.726	527.891	514.042	485.160	446.406	442.554	
	V-THET-BAR	69.898	78.681	80.250	75.837	71.768	64.245	58.041	
IGV,ROTOR,STATOR	MACH-BAR	0.354	0.414	0.460	0.448	0.421	0.385	0.379	
	EFF-POLY	0.868	0.846	0.859	0.820	0.838	0.809	0.746	
PR = 1.4164	INCID-M	3.4	1.4	1.5	1.4	4.9	4.7	-4.0	
TR = 1.1270	DEVIATION	8.9	8.1	7.8	8.0	9.0	10.2	10.4	
EFF-A = 0.8257	OMEGA-BAR	0.106	0.112	0.089	0.110	0.108	0.117	0.150	
EFF-P = 0.8317	LOSS PAR	0.037	0.040	0.034	0.043	0.044	0.050	0.066	
	D-FACTOR	0.727	0.648	0.587	0.592	0.620	0.647	0.623	
	TURNING	49.4	44.7	43.6	43.5	48.0	50.1	43.3	

Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 66)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.943	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34204.0	P-STATIC	13.864	13.864	13.869	13.877	13.890	13.908	13.919	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.888	-2.500	-4.144	-5.731	-7.192	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	320.538	320.421	319.604	317.895	315.245	311.755	309.521	
	VZ-BAR	320.538	320.421	319.604	317.895	315.245	311.755	309.521	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.000	0.001	0.000	
	MACH-BAR	0.289	0.289	0.289	0.287	0.285	0.281	0.279	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.555	14.560	14.589	14.641	14.636	14.622	14.614	14.612
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.408	13.415	13.436	13.459	13.484	13.508	13.519	
	BETABAR	17.494	18.757	19.745	20.191	20.361	16.555	4.531	
	EPSILON	-0.000	-0.854	-2.440	-4.070	-5.676	-7.184	-8.118	
	K-BAR	0.970	0.970	0.970	0.970	0.969	0.969	0.970	
	V-BAR	380.205	379.638	380.684	384.727	379.841	373.478	370.392	
	VZ-BAR	362.621	359.472	358.302	361.083	356.109	357.887	369.235	
	V-THET-BAR	114.289	122.075	128.608	132.790	132.155	106.402	29.257	
	MACH-BAR	0.344	0.344	0.345	0.349	0.344	0.338	0.335	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-5.6	-5.0	-5.4	-6.3	-7.5	-12.7	-25.4	
	OMEGABAR	0.167	0.161	0.128	0.066	0.073	0.092	0.104	
	TURNING	-17.5	-18.8	-19.7	-20.2	-20.4	-16.6	-4.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.555	14.561	14.590	14.641	14.636	14.622	14.614	14.612
WCOR= 2.960	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34204.0	P-STATIC	12.745	12.756	12.771	12.790	12.815	12.832	12.829	
	BETABAR	13.714	14.820	15.783	16.353	16.566	13.383	3.695	
	EPSILON	-1.170	-1.824	-3.823	-5.963	-7.764	-7.269	-6.637	
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	481.710	480.801	482.291	485.873	481.772	477.797	477.084	
	VZ-BAR	467.978	464.804	464.108	466.218	461.774	464.739	476.093	
	V-THET-BAR	114.198	122.978	131.178	136.795	137.362	110.578	30.742	
	MACH-BAR	0.440	0.439	0.440	0.444	0.440	0.436	0.435	
	U-WHEEL	749.501	771.810	816.434	861.057	905.682	950.305	972.617	
	W-BAR-PR	789.058	798.143	827.634	861.349	896.416	959.763	1055.363	
	BETABAR-PR	53.624	54.383	55.890	57.229	58.993	61.034	63.185	
	V-THET-B-P	-635.303	-648.832	-685.255	-724.262	-768.320	-839.727	-941.874	
	MACH-BAR-P	0.720	0.728	0.755	0.786	0.818	0.876	0.963	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	20.748	21.394	21.941	21.806	21.298	20.722	20.939	21.477
ROTOR	T-TOTAL	584.57	584.11	584.18	582.86	585.77	590.24	593.34	585.23
	P-STATIC	15.358	15.545	15.932	16.274	16.559	16.834	16.964	
PR = 1.4699	BETABAR	58.679	54.907	52.737	52.678	58.416	61.299	50.715	
TR = 1.1263	EPSILON	-2.885	-2.237	-3.429	-5.412	-6.985	-6.648	-6.418	
EFF-A = 0.9097	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9119	V-BAR	760.524	782.275	783.109	749.335	698.752	639.300	645.034	
	VZ-BAR	395.347	449.739	474.153	454.323	365.982	306.846	408.418	
	V-THET-BAR	649.690	640.023	623.248	595.888	595.198	560.526	499.262	
	MACH-BAR	0.670	0.691	0.692	0.660	0.610	0.553	0.557	
	U-WHEEL	740.695	762.423	805.883	849.342	892.802	936.261	957.990	
	W-BAR-PR	405.686	466.114	508.125	520.298	471.756	485.115	614.196	
	BETABAR-PR	12.963	15.215	21.065	29.159	39.125	50.774	48.320	
	V-THET-B-P	-91.006	-122.399	-182.635	-253.454	-297.604	-375.735	-458.728	
	MACH-BAR-P	0.357	0.412	0.449	0.458	0.412	0.420	0.530	
	D-FACTOR	0.722	0.647	0.611	0.610	0.687	0.707	0.615	
	TURNING	40.7	39.2	34.8	28.1	19.9	10.3	14.9	
	INCID-M	-3.8	-1.7	0.6	1.7	2.1	2.4	3.4	
	DEVIATION	24.8	19.0	12.5	11.5	13.9	19.6	14.5	
	OMEGABAR-P	0.210	0.101	0.027	0.028	0.131	0.240	0.231	
	LOSS PAR	0.072	0.035	0.009	0.010	0.043	0.067	0.069	
	PT-RATIO	1.425	1.469	1.503	1.489	1.456	1.417	1.433	1.4699
	EFF-AD	0.840	0.922	0.978	0.974	0.876	0.760	0.752	0.9097
	EFF-POLY	0.847	0.926	0.979	0.975	0.882	0.771	0.764	0.9119
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	20.748	21.380	21.936	21.818	21.320	20.721	20.939	21.477
	T-TOTAL	584.57	584.11	584.21	582.84	585.64	590.19	593.34	585.23
	P-STATIC	15.374	15.524	15.860	16.178	16.439	16.707	16.829	
	BETABAR	58.972	54.965	52.486	52.166	57.338	60.317	49.961	
	EPSILON	-0.113	-1.358	-3.057	-4.402	-5.304	-7.345	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	759.247	783.098	788.135	757.324	709.645	650.423	656.824	
	VZ-BAR	391.365	449.565	479.941	464.539	383.016	321.951	422.544	
	V-THET-BAR	650.607	641.133	625.150	598.108	597.309	564.887	502.866	
	MACH-BAR	0.669	0.692	0.697	0.668	0.621	0.563	0.567	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	20.208	20.839	21.320	21.067	20.651	20.223	19.954	20.818
ROTOR PLUS STATOR	T-TOTAL	584.57	584.12	584.22	582.80	584.93	590.08	593.34	585.23
	P-STATIC	18.469	18.470	18.453	18.415	18.373	18.329	18.302	
PR = 1.4248	BETABAR	12.083	10.704	8.657	8.170	7.832	7.162	6.060	
TR = 1.1283	EPSILON	0.450	-0.104	-0.958	-1.595	-2.345	-4.728	-5.489	
EFF-A = 0.8298	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8381	V-BAR	422.232	487.465	532.704	513.894	480.380	443.089	417.004	
	VZ-BAR	412.878	478.988	526.635	508.679	475.899	439.630	414.674	
	V-THET-BAR	83.383	90.465	80.174	73.027	65.458	55.247	44.023	
IGV,ROTOR,STATOR	MACH-BAR	0.361	0.419	0.459	0.443	0.412	0.377	0.354	
	EFF-POLY	0.873	0.870	0.840	0.787	0.799	0.795	0.634	
PR = 1.4167	INCID-M	3.3	2.3	1.7	1.7	5.8	6.7	-4.8	
TR = 1.1283	DEVIATION	11.3	9.4	7.8	7.8	8.5	9.1	9.0	
EFF-A = 0.8185	OMEGA-BAR	0.100	0.092	0.101	0.133	0.137	0.124	0.240	
EFF-P = 0.8247	LOSS PAR	0.035	0.033	0.038	0.052	0.056	0.053	0.105	
	D-FACTOR	0.706	0.633	0.589	0.602	0.639	0.663	0.678	
	TURNING	46.9	44.3	43.8	44.0	49.5	53.2	43.9	

Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 67)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.911	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=28785.0	P-STATIC	13.865	13.866	13.870	13.878	13.891	13.909	13.920	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.845	-2.514	-4.101	-5.698	-7.234	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	320.276	320.151	319.329	317.652	315.046	311.519	309.327	
	VZ-BAR	320.276	320.151	319.329	317.652	315.046	311.519	309.327	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.289	0.289	0.288	0.287	0.284	0.281	0.279	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.561	14.566	14.592	14.643	14.638	14.625	14.617	14.615
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.384	13.396	13.420	13.446	13.472	13.496	13.508	
	BETABAR	22.973	21.824	21.430	21.791	20.925	17.173	11.232	
	EPSILON	-0.000	-0.841	-2.459	-4.054	-5.652	-7.249	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	385.196	383.771	383.836	387.279	382.258	375.967	372.662	
	VZ-BAR	354.646	356.263	357.299	359.605	357.046	359.770	365.525	
	V-THET-BAR	150.340	142.669	140.242	143.767	136.522	111.003	72.588	
	MACH-BAR	0.349	0.348	0.348	0.351	0.346	0.341	0.337	
	INCID-R	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-0.1	-1.9	-3.7	-4.7	-7.0	-12.1	-18.7	
	OMEGABAR	0.160	0.155	0.124	0.063	0.070	0.088	0.100	
	TURNING	-23.0	-21.8	-21.4	-21.8	-20.9	-17.2	-11.2	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.561	14.566	14.593	14.643	14.638	14.625	14.617	14.615
WCOR= 2.927	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=28785.0	P-STATIC	12.733	12.748	12.768	12.785	12.800	12.810	12.809	
	BETABAR	18.078	17.295	17.217	17.699	17.014	13.928	9.139	
	EPSILON	-1.170	-1.667	-2.968	-4.248	-5.457	-6.452	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	484.084	482.576	483.143	486.879	484.156	481.177	480.216	
	VZ-BAR	460.186	460.757	461.493	463.833	462.965	467.002	474.120	
	V-THET-BAR	150.220	143.463	143.007	148.019	141.665	115.817	76.275	
	MACH-BAR	0.442	0.440	0.441	0.445	0.442	0.439	0.438	
	U-WHEEL	630.756	649.531	687.085	724.639	762.193	799.746	818.523	
	V-BAR-PR	665.346	684.409	713.444	740.026	774.211	828.171	880.751	
	BETABAR-PR	46.239	47.681	49.694	51.186	53.273	55.671	57.431	
	V-THET-R-P	-480.536	-506.068	-544.078	-576.619	-620.528	-683.930	-742.249	
	MACH-BAR-P	0.607	0.625	0.651	0.676	0.707	0.756	0.804	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.927	18.351	18.803	18.762	18.761	18.303	17.853	18.586
ROTOR	T-TOTAL	558.64	558.83	560.67	559.46	559.59	560.90	562.27	559.94
-----	P-STATIC	13.859	13.966	14.211	14.441	14.653	14.834	14.915	
PR = 1.2718	BETABAR	51.086	47.208	45.874	45.081	44.014	44.247	43.718	
TR = 1.0795	EPSILON	-2.885	-2.428	-3.195	-4.409	-5.508	-6.270	-6.418	
EFF-A = 0.8953	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8977	V-BAR	689.750	709.774	719.613	695.865	676.925	626.648	581.574	
	VZ-BAR	433.265	482.179	501.025	491.352	486.823	448.894	420.331	
	V-THET-BAR	536.689	520.781	516.542	492.746	470.350	437.243	401.932	
	MACH-BAR	0.617	0.637	0.645	0.623	0.605	0.556	0.513	
	U-WHEEL	623.345	641.631	678.205	714.779	751.354	787.927	806.214	
	V-BAR-PR	441.846	497.117	526.498	539.234	562.141	569.671	583.200	
	BETABAR-PR	11.310	14.058	17.881	24.314	29.993	37.997	43.885	
	V-THET-R-P	-86.656	-120.849	-161.662	-222.033	-281.003	-350.684	-404.282	
	MACH-BAR-P	0.396	0.446	0.472	0.483	0.502	0.506	0.515	
	D-FACTOR	0.537	0.470	0.459	0.456	0.451	0.483	0.502	
	TURNING	34.9	33.6	31.8	26.9	23.3	17.7	13.5	
	INCID-R	-11.2	-8.4	-5.6	-4.4	-3.6	-3.0	-2.3	
	DEVIATION	23.2	17.8	9.3	6.6	4.8	6.8	10.0	
	OMEGABAR-R	0.227	0.126	0.075	0.063	0.060	0.150	0.225	
	LOSS PAR	0.078	0.044	0.027	0.023	0.022	0.052	0.073	
	PT-RATIO	1.231	1.260	1.288	1.281	1.282	1.252	1.221	1.2718
	EFF-AD	0.796	0.883	0.929	0.934	0.933	0.815	0.701	0.8953
	EFF-POLY	0.801	0.886	0.931	0.936	0.934	0.820	0.709	0.8977
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.927	18.342	18.800	18.761	18.763	18.309	17.853	18.586
	T-TOTAL	558.64	558.82	560.67	559.48	559.58	560.88	562.27	559.94
	P-STATIC	13.840	13.919	14.092	14.281	14.475	14.676	14.761	
	BETABAR	51.006	47.017	45.230	44.206	43.038	43.293	42.635	
	EPSILON	-0.113	-1.120	-2.691	-4.122	-5.445	-7.362	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	691.508	713.362	729.697	709.976	693.080	642.309	597.690	
	VZ-BAR	435.124	486.366	513.901	508.929	506.574	467.510	439.708	
	V-THET-BAR	537.447	521.775	518.037	495.029	473.013	440.449	404.833	
	MACH-BAR	0.619	0.640	0.655	0.637	0.620	0.571	0.528	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.324	17.845	18.466	18.483	18.480	17.470	16.178	18.136
ROTOR PLUS STATOR	T-TOTAL	558.64	558.82	560.67	559.45	559.62	561.04	562.27	559.94
----------	P-STATIC	15.595	15.601	15.596	15.564	15.517	15.440	15.400	
PR = 1.2410	BETABAR	13.214	12.843	12.341	12.717	12.053	8.532	5.377	
TR = 1.0795	EPSILON	0.450	-0.198	-1.514	-2.832	-4.141	-5.274	-5.489	
PFF-A = 0.8001	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8062	V-BAR	445.688	502.654	563.337	564.068	572.278	482.673	307.249	
	VZ-BAR	433.887	490.084	550.320	550.232	559.661	477.279	305.897	
	V-THET-BAR	101.879	111.707	120.404	124.166	119.498	71.820	28.790	
IGV,ROTOR,STATOR	MACH-BAR	0.390	0.442	0.497	0.498	0.506	0.423	0.266	
----------	EFF-POLY	0.776	0.804	0.848	0.834	0.816	0.513	0.300	
PR = 1.2342	INCID-R	-4.7	-5.6	-5.6	-6.3	-8.5	-10.3	-12.1	
TR = 1.0795	DEVIATION	12.4	11.5	11.5	12.4	12.7	10.5	8.3	
EFF-A = 0.7802	OMEGA-BAR	0.148	0.112	0.071	0.071	0.066	0.231	0.542	
EFF-P = 0.7859	LOSS PAR	0.051	0.040	0.026	0.028	0.027	0.099	0.238	
	D-FACTOR	0.579	0.505	0.437	0.415	0.388	0.495	0.768	
	TURNING	37.8	34.2	32.9	31.5	31.0	34.8	37.3	

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Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 68)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.873	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29078.0	P-STATIC	13.906	13.906	13.910	13.918	13.930	13.947	13.957	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.876	-2.514	-4.101	-5.698	-7.234	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	312.222	312.093	311.281	309.671	307.150	303.719	301.592	
	VZ-BAR	312.222	312.093	311.281	309.671	307.150	303.719	301.592	
	V-THET-BAR	0.000	0.001	0.001	0.001	0.001	0.000	0.000	
	MACH-BAR	0.282	0.282	0.281	0.279	0.277	0.274	0.272	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.569	14.573	14.597	14.646	14.641	14.628	14.620	14.619
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.401	13.411	13.434	13.460	13.485	13.509	13.520	
	BETABAR	20.553	21.189	21.559	21.436	20.487	16.289	9.905	
	EPSILON	-0.000	-0.868	-2.459	-4.032	-5.634	-7.241	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	383.469	382.361	382.167	385.382	380.438	374.339	371.130	
	VZ-BAR	359.062	356.511	355.430	358.724	356.375	359.270	365.599	
	V-THET-BAR	134.624	138.200	140.432	140.841	133.150	104.994	63.838	
	MACH-BAR	0.346	0.346	0.346	0.349	0.345	0.339	0.336	
	INCID-R	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.5	-2.6	-3.6	-5.1	-7.4	-13.0	-20.0	
	OMEGABAR	0.159	0.154	0.124	0.063	0.070	0.089	0.101	
	TURNING	-20.6	-21.2	-21.6	-21.4	-20.5	-16.3	-9.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.569	14.573	14.598	14.646	14.641	14.628	14.620	14.619
WCOR= 2.888	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29078.0	P-STATIC	12.752	12.766	12.786	12.801	12.814	12.823	12.822	
	BETABAR	16.190	16.816	17.306	17.392	16.637	13.199	8.052	
	EPSILON	-1.170	-1.577	-2.837	-4.132	-5.417	-6.404	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	482.458	480.960	481.223	485.016	482.509	479.741	478.877	
	VZ-BAR	463.325	460.392	459.438	462.842	462.308	467.035	474.156	
	V-THET-BAR	134.516	139.143	143.152	144.973	138.148	109.536	67.080	
	MACH-BAR	0.440	0.439	0.439	0.443	0.440	0.438	0.437	
	U-WHEEL	637.177	656.143	694.078	732.014	769.951	807.886	826.855	
	V-BAR-PR	683.621	692.284	717.363	747.562	782.889	840.139	895.590	
	BETABAR-PR	47.332	48.314	50.173	51.746	53.805	56.224	58.033	
	V-THET-R-P	-502.660	-516.999	-550.926	-587.041	-631.803	-698.351	-759.775	
	MACH-BAR-P	0.624	0.632	0.655	0.682	0.714	0.767	0.817	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.956	18.458	18.976	18.971	18.985	18.541	18.265	18.784
ROTOR	T-TOTAL	559.83	560.36	561.49	560.15	560.75	562.69	564.29	561.14
-----	P-STATIC	14.192	14.317	14.576	14.818	15.025	15.197	15.282	
PR = 1.2849	BETABAR	53.032	50.079	47.989	46.565	45.738	46.240	44.155	
TR = 1.0818	EPSILON	-2.886	-2.586	-3.041	-4.189	-5.433	-6.211	-6.418	
EFF-A = 0.9090	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.9108	V-BAR	661.221	686.441	699.760	677.215	659.902	611.001	580.265	
	VZ-BAR	397.637	440.531	468.323	465.600	460.578	422.592	416.316	
	V-THET-BAR	528.296	526.389	519.935	491.765	472.586	441.292	404.213	
	MACH-BAR	0.589	0.613	0.625	0.605	0.588	0.540	0.511	
	U-WHEEL	629.691	648.162	685.109	722.055	759.001	795.948	814.421	
	V-BAR-PR	410.361	457.060	496.641	519.478	542.411	551.731	584.457	
	BETABAR-PR	14.305	15.445	19.423	26.314	31.875	40.002	44.577	
	V-THET-R-P	-101.394	-121.772	-165.174	-230.289	-286.415	-354.656	-410.208	
	MACH-BAR-P	0.366	0.408	0.444	0.464	0.483	0.488	0.515	
	D-FACTOR	0.599	0.539	0.505	0.488	0.485	0.517	0.514	
	TURNING	33.0	32.9	30.8	25.4	21.9	16.2	13.5	
	INCID-P	-10.1	-7.8	-5.1	-3.8	-3.1	-2.4	-1.7	
	DEVIATION	26.2	19.2	10.8	8.6	6.7	8.8	10.7	
	OMEGABAR-P	0.243	0.141	0.059	0.038	0.043	0.142	0.194	
	LOSS PAR	0.082	0.049	0.021	0.014	0.015	0.048	0.062	
	PT-RATIO	1.232	1.267	1.300	1.295	1.297	1.268	1.249	1.2849
	EFF-AD	0.777	0.870	0.944	0.961	0.952	0.827	0.748	0.9090
	EFF-POLY	0.783	0.874	0.945	0.962	0.953	0.832	0.755	0.9108
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.956	18.449	18.973	18.970	18.988	18.545	18.265	18.784
	T-TOTAL	559.83	560.35	561.51	560.16	560.72	562.67	564.29	561.14
	P-STATIC	14.210	14.287	14.470	14.673	14.868	15.060	15.152	
	BETABAR	53.338	49.985	47.381	45.721	44.805	45.360	43.300	
	EPSILON	-0.113	-0.864	-2.587	-4.258	-5.424	-7.297	-7.979	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	659.513	688.520	708.834	690.011	674.331	624.744	593.643	
	VZ-BAR	393.792	442.738	479.958	481.731	478.443	438.972	432.038	
	V-THET-BAR	529.043	527.232	521.612	494.010	475.198	444.530	407.131	
	MACH-BAR	0.588	0.615	0.634	0.617	0.601	0.553	0.523	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.427	18.029	18.666	18.699	18.731	17.838	16.751	18.389
ROTOR PLUS STATOR	T-TOTAL	559.83	560.35	561.49	560.14	560.79	562.84	564.29	561.14
----------	P-STATIC	15.961	15.968	15.966	15.936	15.894	15.825	15.786	
PR = 1.2579	BETABAR	12.433	12.884	12.770	13.164	13.155	9.595	5.526	
TR = 1.0818	EPSILON	0.450	-0.233	-1.573	-2.861	-4.095	-5.255	-5.489	
EFF-A = 0.8281	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8336	V-BAR	408.350	478.619	542.706	548.157	555.692	476.602	337.641	
	VZ-BAR	398.773	466.564	529.283	533.751	541.108	469.889	336.073	
	V-THET-BAR	87.916	106.742	119.954	124.839	126.473	79.589	32.511	
IGV,ROTOR,STATOR	MACH-BAR	0.356	0.420	0.478	0.483	0.490	0.417	0.292	
----------	EFF-POLY	0.794	0.827	0.857	0.851	0.824	0.553	0.321	
PR = 1.2514	INCID-R	-2.3	-2.7	-3.4	-4.8	-6.7	-8.3	-11.5	
TR = 1.0818	DEVIATION	11.7	11.6	11.9	12.8	13.8	11.6	8.5	
EFF-A = 0.8104	OMEGA-BAR	0.141	0.101	0.068	0.063	0.062	0.203	0.486	
EFF-P = 0.8148	LOSS PAR	0.049	0.036	0.025	0.024	0.025	0.087	0.214	
	D-FACTOR	0.618	0.527	0.451	0.420	0.393	0.489	0.714	
	TURNING	40.9	37.1	34.6	32.6	31.6	35.8	37.8	

Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 69)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.818	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29104.0	P-STATIC	13.920	13.920	13.924	13.933	13.945	13.962	13.972	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.876	-2.534	-4.164	-5.735	-7.286	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	309.322	309.193	308.397	306.719	304.151	300.704	298.612	
	VZ-BAR	309.322	309.193	308.397	306.719	304.151	300.704	298.612	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.001	0.000	
	MACH-BAR	0.279	0.279	0.278	0.277	0.274	0.271	0.269	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.579	14.562	14.602	14.649	14.644	14.632	14.624	14.624
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.447	13.458	13.481	13.506	13.530	13.553	13.564	
	BETABAR	22.576	21.654	21.404	21.710	20.645	17.851	11.338	
	EPSILON	-0.000	-0.848	-2.492	-4.116	-5.718	-7.286	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	377.170	375.736	375.058	378.188	373.330	367.361	364.106	
	VZ-BAR	348.268	349.218	349.190	351.363	349.355	349.641	357.000	
	V-THET-BAR	144.800	138.648	136.873	139.893	131.628	112.612	71.583	
	MACH-BAR	0.342	0.340	0.340	0.343	0.338	0.333	0.330	
	INCID-R	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-0.5	-2.1	-3.7	-4.8	-7.2	-11.4	-18.6	
	OMEGABAR	0.150	0.145	0.120	0.060	0.067	0.085	0.097	
	TURNING	-22.6	-21.7	-21.4	-21.7	-20.6	-17.9	-11.3	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.579	14.582	14.603	14.649	14.644	14.632	14.624	14.624
WCOR= 2.832	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29104.0	P-STATIC	12.830	12.845	12.863	12.878	12.890	12.899	12.898	
	BETABAR	17.826	17.221	17.240	17.658	16.821	14.495	9.236	
	EPSILON	-1.170	-1.537	-2.808	-4.096	-5.383	-6.370	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	472.635	470.994	471.003	474.677	472.275	469.594	468.646	
	VZ-BAR	449.945	449.879	449.843	452.312	452.068	454.622	462.570	
	V-THET-BAR	144.685	139.441	139.590	143.984	136.669	117.530	75.219	
	MACH-BAR	0.431	0.429	0.429	0.433	0.431	0.428	0.427	
	U-WHEEL	637.746	656.729	694.699	732.669	770.639	808.610	827.594	
	V-BAR-PR	667.502	685.559	714.501	742.391	778.648	827.216	883.198	
	BETABAR-PR	47.618	48.985	50.979	52.462	54.507	56.659	58.416	
	V-THET-B-P	-493.061	-517.288	-555.109	-588.685	-633.969	-691.080	-752.375	
	MACH-BAR-P	0.609	0.625	0.651	0.677	0.710	0.754	0.805	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.030	18.581	19.097	19.099	19.180	18.773	18.617	18.948
ROTOR	T-TOTAL	561.23	561.38	562.47	561.46	562.21	564.58	566.42	562.50
-----	P-STATIC	14.348	14.498	14.769	15.015	15.238	15.421	15.521	
PR = 1.2957	BETABAR	57.679	52.127	49.320	48.499	47.425	49.644	46.799	
TR = 1.0844	EPSILON	-2.886	-2.548	-2.957	-4.223	-5.289	-6.152	-6.418	
EFF-A = 0.9114	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.9130	V-BAR	652.701	679.387	691.630	669.356	655.472	608.722	586.968	
	VZ-BAR	348.973	417.100	450.827	443.536	443.468	394.166	401.817	
	V-THET-BAR	551.575	536.142	524.505	501.307	482.676	463.870	427.873	
	MACH-BAR	0.581	0.606	0.617	0.596	0.583	0.537	0.516	
	U-WHEEL	630.254	648.741	685.721	722.700	759.680	796.660	815.149	
	V-BAR-PR	357.732	432.055	478.829	495.756	522.908	515.902	558.067	
	BETABAR-PR	12.705	15.087	19.673	26.521	31.991	40.171	43.944	
	V-THET-B-P	-78.678	-112.599	-161.216	-221.393	-277.004	-332.789	-387.276	
	MACH-BAR-P	0.318	0.385	0.427	0.482	0.465	0.455	0.491	
	D-FACTOR	0.675	0.575	0.532	0.522	0.513	0.559	0.585	
	TURNING	34.9	33.9	31.3	25.9	22.5	16.5	14.5	
	INCID-P	-9.8	-7.1	-4.3	-3.1	-2.4	-2.0	-1.4	
	DEVIATION	24.6	18.8	11.1	8.9	6.8	9.0	10.1	
	OMEGABAR-P	0.275	0.145	0.060	0.044	0.041	0.145	0.183	
	LOSS PAR	0.094	0.050	0.021	0.016	0.015	0.049	0.059	
	PT-RATIO	1.237	1.274	1.308	1.304	1.310	1.283	1.273	1.2957
	EFF-AD	0.764	0.872	0.945	0.956	0.956	0.835	0.777	0.9114
	EFF-POLY	0.770	0.876	0.946	0.957	0.957	0.840	0.784	0.9130
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.030	18.574	19.094	19.097	19.183	18.776	18.617	18.948
	T-TOTAL	561.23	561.37	562.48	561.47	562.18	564.55	566.42	562.50
	P-STATIC	14.383	14.485	14.683	14.882	15.084	15.277	15.376	
	BETABAR	58.287	52.219	48.817	47.683	46.432	48.585	45.759	
	EPSILON	-0.113	-1.120	-2.570	-3.916	-5.293	-7.201	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	649.304	679.960	699.021	681.031	669.570	622.932	601.551	
	VZ-BAR	341.321	416.594	460.274	458.485	461.479	412.071	419.686	
	V-THET-BAR	552.355	537.219	526.094	503.577	485.137	467.163	430.961	
	MACH-BAR	0.577	0.606	0.624	0.607	0.596	0.551	0.530	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.589	18.181	18.816	18.882	18.904	18.174	17.368	18.586
ROTOR PLUS STATOR	T-TOTAL	561.23	561.38	562.48	561.46	562.23	564.67	566.42	562.50
----------	P-STATIC	16.270	16.277	16.275	16.250	16.211	16.148	16.112	
PR = 1.2709	BETABAR	12.344	12.891	13.172	13.715	13.629	11.045	6.889	
TR = 1.0844	EPSILON	0.450	-0.259	-1.565	-2.805	-3.966	-5.127	-5.489	
EFF-A = 0.8396	K-BAR	0.925	0.925	0.925	0.925	0.925	0.925	0.925	
EFF-P = 0.8450	V-BAR	385.372	457.769	523.778	532.217	538.758	474.567	380.002	
	VZ-BAR	376.463	446.224	509.997	517.041	523.588	465.777	377.259	
	V-THET-BAR	82.385	102.155	119.357	126.187	126.948	90.917	45.578	
IGV,ROTOR,STATOR	MACH-BAR	0.336	0.400	0.460	0.468	0.474	0.414	0.329	
----------	EFF-POLY	0.831	0.843	0.874	0.885	0.827	0.623	0.402	
PR = 1.2648	INCID-R	2.6	-0.4	-2.0	-2.8	-5.1	-5.0	-9.0	
TR = 1.0844	DEVIATION	11.6	11.6	12.3	13.4	14.3	13.0	9.8	
EFF-A = 0.8247	OMEGA-BAR	0.121	0.096	0.063	0.051	0.068	0.172	0.385	
EFF-P = 0.8280	LOSS PAR	0.042	0.034	0.023	0.020	0.027	0.073	0.169	
	D-FACTOR	0.663	0.560	0.474	0.441	0.420	0.502	0.655	
	TURNING	45.9	39.3	35.6	34.0	32.8	37.5	38.9	

Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 70)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.728	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
MCOR=29197.0	P-STATIC	13.987	13.988	13.991	13.999	14.010	14.025	14.034	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.876	-2.545	-4.164	-5.735	-7.284	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	295.348	295.232	294.469	292.875	290.427	287.160	285.168	
	VZ-BAR	295.348	295.232	294.469	292.875	290.427	287.160	285.168	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.001	0.000	
	MACH-BAR	0.266	0.266	0.266	0.264	0.262	0.259	0.257	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.592	14.595	14.611	14.654	14.649	14.638	14.631	14.631
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.569	13.580	13.600	13.621	13.643	13.664	13.673	
	BETABAR	22.994	21.576	21.082	21.405	20.639	17.306	12.377	
	EPSILON	-0.000	-0.848	-2.495	-4.122	-5.700	-7.278	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	357.954	356.496	355.468	358.746	354.169	348.503	345.481	
	VZ-BAR	329.512	331.513	331.676	334.000	331.436	332.702	337.412	
	V-THET-BAR	139.831	131.093	127.862	130.928	124.840	103.672	74.045	
	MACH-BAR	0.324	0.323	0.322	0.325	0.320	0.315	0.312	
	INCID-B	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-0.1	-2.2	-4.1	-5.1	-7.2	-11.9	-17.5	
	OMEGABAR	0.144	0.140	0.119	0.059	0.066	0.084	0.097	
	TURNING	-23.0	-21.6	-21.1	-21.4	-20.6	-17.3	-12.4	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.592	14.595	14.611	14.654	14.649	14.638	14.631	14.631
WCOR= 2.740	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
MCOR=29197.0	P-STATIC	13.020	13.034	13.050	13.062	13.073	13.080	13.079	
	BETABAR	18.222	17.219	17.036	17.479	16.862	14.108	10.112	
	EPSILON	-1.170	-1.447	-2.747	-4.086	-5.383	-6.426	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	446.819	445.224	445.027	448.845	446.608	444.087	443.152	
	VZ-BAR	424.412	425.266	425.499	428.121	427.406	430.676	436.269	
	V-THET-BAR	139.720	131.801	130.382	134.812	129.545	108.240	77.805	
	MACH-BAR	0.407	0.405	0.405	0.409	0.406	0.404	0.403	
	U-WHEEL	639.784	658.828	696.919	735.010	773.102	811.193	830.239	
	V-BAR-PR	655.889	677.216	708.533	737.247	772.561	824.400	869.762	
	BETABAR-PR	49.678	51.097	53.091	54.499	56.409	58.504	59.894	
	V-THET-B-P	-500.064	-527.027	-566.537	-600.198	-643.557	-702.953	-752.433	
	MACH-BAR-P	0.597	0.616	0.645	0.671	0.703	0.750	0.791	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.176	18.779	19.370	19.341	19.392	19.109	18.838	19.202
ROTOR	T-TOTAL	562.79	562.25	563.54	562.41	563.33	566.53	569.01	563.72
-----	P-STATIC	14.799	14.942	15.215	15.460	15.681	15.881	15.977	
PR = 1.3124	BETABAR	64.416	55.074	51.141	50.421	49.907	52.216	53.116	
TR = 1.0868	EPSILON	-2.885	-2.330	-2.934	-4.133	-5.217	-6.140	-6.418	
EFF-A = 0.9326	K-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
EFF-P = 0.9332	V-BAR	620.978	653.377	671.813	647.135	631.263	592.068	560.633	
	VZ-BAR	268.155	374.091	421.496	412.312	406.556	362.755	336.487	
	V-THET-BAR	560.094	535.375	523.136	498.779	482.911	467.917	448.426	
	MACH-BAR	0.550	0.581	0.597	0.575	0.559	0.521	0.491	
	U-WHEEL	632.268	650.814	687.912	725.010	762.107	799.206	817.754	
	V-BAR-PR	277.698	391.517	452.602	470.338	493.227	491.293	499.627	
	BETABAR-PR	15.064	17.119	21.347	28.749	34.478	42.404	47.664	
	V-THET-B-P	-72.173	-115.439	-164.776	-226.231	-279.196	-331.288	-369.328	
	MACH-BAR-P	0.246	0.348	0.403	0.418	0.437	0.432	0.437	
	D-FACTOR	0.799	0.633	0.569	0.557	0.552	0.595	0.615	
	TURNING	38.6	34.0	31.7	25.8	21.9	16.1	12.2	
	INCID-B	-7.7	-5.0	-2.2	-1.1	-0.5	-0.1	0.1	
	DEVIATION	26.9	20.9	12.7	11.1	9.3	11.2	13.8	
	OMEGABAR-P	0.296	0.131	0.033	0.021	0.029	0.130	0.201	
	LOSS PAR	0.100	0.045	0.012	0.007	0.010	0.042	0.061	
	PT-RATIO	1.246	1.287	1.326	1.320	1.324	1.306	1.288	1.3124
	EFF-AD	0.763	0.890	0.971	0.980	0.977	0.859	0.773	0.9326
	EFF-POLY	0.769	0.893	0.972	0.980	0.971	0.864	0.780	0.9332
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.176	18.770	19.367	19.340	19.393	19.114	18.838	19.202
	T-TOTAL	562.79	562.24	563.55	562.42	563.28	566.48	569.01	563.72
	P-STATIC	14.825	14.935	15.139	15.346	15.551	15.753	15.846	
	BETABAR	65.091	55.259	50.685	49.646	48.995	51.160	51.883	
	EPSILON	-0.113	-1.331	-2.543	-3.750	-5.435	-7.028	-7.979	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	618.412	653.395	678.265	657.812	643.211	604.863	574.083	
	VZ-BAR	260.460	372.379	429.731	425.680	422.027	379.349	354.362	
	V-THET-BAR	560.886	536.533	524.758	500.984	485.399	471.115	451.663	
	MACH-BAR	0.547	0.581	0.604	0.584	0.570	0.533	0.503	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.813	18.364	19.003	19.063	19.062	18.516	18.021	18.803
ROTOR PLUS STATOR	T-TOTAL	562.79	562.25	563.54	562.41	563.32	566.56	569.01	563.72
----------	P-STATIC	16.703	16.709	16.709	16.688	16.654	16.602	16.571	
PR = 1.2852	BETABAR	14.605	14.015	13.610	14.095	13.777	12.077	9.643	
TR = 1.0868	EPSILON	0.450	-0.353	-1.566	-2.785	-3.859	-4.988	-5.489	
EFF-A = 0.8561	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8612	V-BAR	350.944	423.647	494.240	501.991	506.031	457.094	402.383	
	VZ-BAR	339.603	411.045	480.362	486.878	491.471	446.973	396.699	
	V-THET-BAR	88.494	102.555	116.300	122.251	120.513	95.646	67.398	
IGV,ROTOR,STATOR	MACH-BAR	0.305	0.369	0.433	0.440	0.443	0.398	0.348	
----------	EFF-POLY	0.854	0.835	0.837	0.852	0.795	0.618	0.501	
PR = 1.2796	INCID-B	9.4	2.6	-0.1	-0.9	-2.5	-2.5	-2.9	
TR = 1.0868	DEVIATION	13.8	12.7	12.7	13.7	14.4	14.1	12.6	
EFF-A = 0.8432	OMEGA-BAR	0.108	0.106	0.086	0.069	0.086	0.178	0.273	
EFF-P = 0.8463	LOSS PAR	0.037	0.037	0.032	0.027	0.035	0.075	0.119	
	D-FACTOR	0.703	0.594	0.502	0.468	0.452	0.516	0.599	
	TURNING	50.5	41.2	37.1	35.6	35.2	39.1	42.2	

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Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 71)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.577	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29064.0	P-STATIC	14.067	14.067	14.077	14.087	14.101	14.109		
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.910	-2.567	-4.176	-5.782	-7.288	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	277.897	277.778	277.025	275.549	273.270	270.231	268.377	
	VZ-BAR	277.897	277.778	277.025	275.549	273.270	270.231	268.377	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.250	0.250	0.250	0.248	0.246	0.243	0.242	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.612	14.614	14.623	14.660	14.657	14.647	14.640	14.641
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.706	13.713	13.730	13.749	13.768	13.786	13.795	
	BETABAR	19.334	20.642	21.392	21.399	20.610	18.316	13.696	
	EPSILON	-0.000	-0.887	-2.525	-4.103	-5.702	-7.282	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	336.061	335.135	333.459	331.424	332.216	326.915	323.923	
	VZ-BAR	317.108	313.617	310.487	313.232	310.952	310.336	314.713	
	V-THET-BAR	111.262	118.143	121.627	122.746	116.945	102.738	76.695	
	MACH-BAR	0.304	0.303	0.301	0.304	0.300	0.295	0.293	
	INCID-R	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-3.7	-3.1	-3.7	-5.1	-7.3	-10.9	-16.2	
	OMEGABAR	0.132	0.128	0.115	0.055	0.062	0.081	0.093	
	TURNING	-19.3	-20.6	-21.4	-21.4	-20.6	-18.3	-13.7	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.612	14.614	14.623	14.661	14.656	14.647	14.640	14.641
WCOR= 2.586	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29064.0	P-STATIC	13.226	13.236	13.248	13.261	13.273	13.283	13.284	
	BETABAR	15.413	16.575	17.322	17.517	16.921	15.025	11.249	
	EPSILON	-1.170	-1.485	-3.042	-4.715	-6.103	-6.944	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	418.300	417.045	416.337	419.680	417.125	414.198	413.126	
	VZ-BAR	403.255	399.715	397.454	400.219	399.066	400.025	405.189	
	V-THET-BAR	111.174	118.965	123.963	126.316	121.406	107.377	80.591	
	MACH-BAR	0.380	0.379	0.378	0.381	0.379	0.376	0.375	
	U-WHEEL	636.870	655.827	693.744	731.662	769.580	807.498	826.457	
	V-BAR-PR	662.549	669.326	694.713	725.690	761.177	806.348	848.819	
	BETABAR-PR	52.509	53.330	55.101	56.529	58.379	60.256	61.487	
	V-THET-R-P	-525.695	-536.862	-569.781	-605.346	-648.174	-700.121	-745.866	
	MACH-BAR-P	0.602	0.608	0.631	0.659	0.691	0.732	0.771	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.441	19.095	19.683	19.465	19.319	19.156	18.838	19.345
ROTOR	T-TOTAL	564.71	564.06	564.90	563.08	563.86	567.93	572.39	564.80
-----	P-STATIC	15.064	15.201	15.489	15.740	15.948	16.181	16.234	
PR = 1.3213	BETABAR	63.309	55.731	52.400	52.081	53.134	56.777	63.298	
TR = 1.0889	EPSILON	-2.885	-2.035	-2.998	-4.472	-5.800	-6.578	-6.418	
EFF-A = 0.9350	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9349	V-BAR	617.236	653.722	670.192	631.081	601.007	570.797	534.954	
	VZ-BAR	277.248	368.149	408.912	387.828	360.575	312.777	240.384	
	V-THET-BAR	551.465	540.021	530.987	497.848	480.826	477.399	477.903	
	MACH-BAR	0.545	0.580	0.595	0.559	0.531	0.501	0.466	
	U-WHEEL	629.388	647.850	684.778	721.708	758.636	795.564	814.029	
	V-BAR-PR	287.990	383.620	436.929	447.855	455.188	486.268	413.237	
	BETABAR-PR	15.699	16.311	20.607	29.992	37.613	45.501	54.429	
	V-THET-R-P	-77.923	-107.828	-153.792	-223.860	-277.809	-318.165	-336.126	
	MACH-BAR-P	0.254	0.340	0.388	0.397	0.402	0.391	0.360	
	D-FACTOR	0.796	0.651	0.591	0.587	0.600	0.650	0.721	
	TURNING	36.8	37.0	34.5	26.5	20.8	14.8	7.1	
	INCID-R	-4.9	-2.8	-0.2	1.0	1.5	1.6	1.7	
	DEVIATION	27.6	20.1	12.0	12.3	12.4	14.3	20.6	
	OMEGABAR-P	0.287	0.115	0.006	0.015	0.056	0.154	0.269	
	LOSS PAR	0.097	0.040	0.002	0.005	0.019	0.047	0.070	
	PT-RATIO	1.262	1.307	1.346	1.328	1.318	1.308	1.287	1.3213
	EFF-AD	0.776	0.909	0.995	0.986	0.944	0.841	0.722	0.9350
	EFF-POLY	0.782	0.911	0.995	0.986	0.946	0.846	0.731	0.9349
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.441	19.080	19.681	19.474	19.322	19.163	18.838	19.345
	T-TOTAL	564.71	564.06	564.91	563.12	563.81	567.83	572.39	564.80
	P-STATIC	15.069	15.188	15.430	15.650	15.842	16.023	16.113	
	BETABAR	63.574	55.868	52.090	51.427	52.234	55.482	61.457	
	EPSILON	-0.113	-1.325	-2.715	-3.897	-5.195	-6.712	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	616.682	653.783	675.153	640.003	611.189	583.073	547.950	
	VZ-BAR	274.450	366.894	414.825	399.052	374.322	330.428	261.821	
	V-THET-BAR	552.243	540.925	532.680	500.361	483.149	480.362	481.352	
	MACH-BAR	0.545	0.580	0.600	0.568	0.540	0.512	0.478	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.917	18.590	19.174	19.048	18.906	18.581	18.056	18.849
ROTOR PLUS STATOR	T-TOTAL	564.71	564.06	564.92	563.16	563.72	567.52	572.39	564.80
----------	P-STATIC	16.926	16.933	16.931	16.908	16.877	16.836	16.810	
PR = 1.2874	BETABAR	13.672	13.697	13.583	13.772	13.257	11.451	8.891	
TR = 1.0889	EPSILON	0.450	-0.352	-1.358	-2.332	-3.372	-4.555	-5.489	
EFF-A = 0.8422	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8477	V-BAR	330.750	421.845	486.852	475.958	464.837	435.219	372.815	
	VZ-BAR	321.378	409.848	473.235	462.274	452.448	426.552	368.336	
	V-THET-BAR	78.176	99.891	114.340	113.307	106.598	86.415	57.618	
IGV,ROTOR,STATOR	MACH-BAR	0.286	0.367	0.425	0.416	0.406	0.378	0.321	
----------	EFF-POLY	0.800	0.806	0.779	0.774	0.747	0.630	0.499	
PR = 1.2827	INCID-R	7.9	3.2	1.3	0.9	0.7	1.9	6.7	
TR = 1.0889	DEVIATION	12.9	12.4	12.7	13.4	13.9	13.4	11.8	
EFF-A = 0.8327	OMEGA-BAR	0.156	0.126	0.119	0.111	0.120	0.185	0.287	
EFF-P = 0.8355	LOSS PAR	0.054	0.044	0.044	0.043	0.048	0.078	0.125	
	D-FACTOR	0.736	0.601	0.516	0.501	0.499	0.551	0.666	
	TURNING	49.9	42.2	38.5	37.7	39.0	44.0	52.6	

Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 72)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	BASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.539	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29172.0	P-STATIC	14.086	14.087	14.090	14.096	14.106	14.119	14.127	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.872	-2.536	-4.145	-5.764	-7.258	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	273.474	273.361	272.646	271.210	268.979	265.993	264.157	
	VZ-BAR	273.474	273.361	272.646	271.210	268.979	265.993	264.157	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.246	0.246	0.246	0.244	0.242	0.240	0.238	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.616	14.618	14.626	14.662	14.658	14.649	14.642	14.643
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.733	13.742	13.759	13.778	13.797	13.814	13.823	
	BETABAR	22.726	21.432	21.226	21.480	20.598	18.161	13.690	
	EPSILON	-0.000	-0.846	-2.500	-4.067	-5.698	-7.275	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	331.656	330.248	328.273	331.203	327.011	321.767	318.826	
	VZ-BAR	305.908	307.410	306.002	308.200	306.105	305.722	309.768	
	V-THET-BAR	128.126	120.670	118.851	121.278	115.045	100.290	75.458	
	MACH-BAR	0.300	0.298	0.297	0.299	0.295	0.291	0.288	
	INCID-R	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-0.4	-2.3	-3.9	-5.0	-7.3	-11.1	-16.2	
	OMEGABAR	0.128	0.125	0.114	0.055	0.061	0.080	0.093	
	TURNING	-22.7	-21.4	-21.2	-21.5	-20.6	-18.2	-13.7	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.616	14.618	14.626	14.662	14.658	14.648	14.642	14.643
WCOR= 2.547	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29172.0	P-STATIC	13.271	13.283	13.295	13.306	13.319	13.329	13.329	
	BETABAR	18.116	17.203	17.214	17.603	16.924	14.909	11.257	
	EPSILON	-1.170	-1.327	-2.958	-4.741	-6.155	-7.081	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	411.735	410.238	409.451	412.743	410.218	407.215	406.176	
	VZ-BAR	391.325	391.883	391.110	393.417	392.451	393.495	398.362	
	V-THET-BAR	128.024	121.334	121.171	124.822	119.419	104.766	79.290	
	MACH-BAR	0.374	0.372	0.372	0.375	0.372	0.370	0.369	
	U-WHEEL	639.236	658.263	696.322	734.381	772.440	810.499	829.528	
	V-BAR-PR	643.796	664.738	695.537	725.496	761.880	808.025	849.480	
	BETABAR-PR	52.566	53.874	55.783	57.160	58.994	60.856	62.033	
	V-THET-B-R	-511.212	-536.929	-575.151	-609.559	-653.021	-705.733	-750.237	
	MACH-BAR-R	0.584	0.603	0.631	0.659	0.692	0.733	0.771	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.514	19.104	19.780	19.599	19.420	19.235	18.808	19.438
ROTOR	T-TOTAL	565.12	564.64	565.47	564.22	564.59	569.06	573.16	565.61
-----	P-STATIC	15.099	15.245	15.536	15.785	15.993	16.186	16.281	
PR = 1.3274	BETABAR	67.053	57.307	52.168	52.321	52.988	57.120	65.732	
TR = 1.0904	EPSILON	-2.885	-2.119	-2.876	-4.492	-5.865	-6.617	-6.418	
EFF-A = 0.9347	K-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
EFF-P = 0.9346	V-BAR	619.829	650.680	672.954	637.456	604.985	573.403	527.388	
	VZ-BAR	241.658	351.482	412.749	389.636	364.190	311.361	216.758	
	V-THET-BAR	570.779	547.217	531.510	504.513	483.086	481.362	480.785	
	MACH-BAR	0.548	0.577	0.597	0.565	0.534	0.503	0.459	
	U-WHEEL	631.726	650.257	687.323	724.389	761.455	798.521	817.053	
	V-BAR-IR	249.225	366.293	441.223	407.089	458.400	484.645	400.076	
	BETABAR-PR	14.155	16.303	20.677	29.435	37.392	45.554	57.194	
	V-THET-B-P	-60.948	-103.040	-155.812	-219.876	-278.369	-317.159	-336.268	
	MACH-BAR-P	0.220	0.325	0.392	0.396	0.405	0.390	0.348	
	D-FACTOR	0.851	0.676	0.587	0.592	0.599	0.657	0.739	
	TURNING	38.4	37.6	35.1	27.7	21.6	15.3	8.8	
	INCID-P	-4.8	-2.3	0.5	1.6	2.1	2.2	2.3	
	DEVIATION	26.0	20.0	12.1	11.8	12.2	14.3	23.3	
	OMEGABAR-P	0.296	0.133	0.001	0.016	0.054	0.162	0.287	
	LOSS PAR	0.101	0.046	0.000	0.006	0.018	0.050	0.070	
	PT-RATIO	1.267	1.307	1.352	1.337	1.325	1.313	1.285	1.3274
	EFF-AD	0.781	0.898	0.999	0.985	0.947	0.835	0.707	0.9347
	EFF-POLY	0.788	0.901	0.999	0.985	0.948	0.840	0.717	0.9346
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.514	19.091	19.776	19.607	19.422	19.244	18.808	19.438
	T-TOTAL	565.12	564.64	565.48	564.26	564.54	568.95	573.16	565.61
	P-STATIC	15.090	15.217	15.471	15.700	15.899	16.078	16.168	
	BETABAR	67.038	57.281	51.799	51.725	52.252	55.934	63.809	
	EPSILON	-0.113	-1.325	-2.850	-3.812	-5.174	-6.705	-7.979	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	620.774	652.291	678.391	645.820	613.926	584.940	539.665	
	VZ-BAR	242.177	352.603	419.524	400.047	375.844	327.870	238.191	
	V-THET-BAR	571.585	548.396	533.115	506.997	485.433	488.315	484.255	
	MACH-BAR	0.548	0.578	0.603	0.572	0.542	0.513	0.470	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.021	18.689	19.251	19.108	18.942	18.634	18.090	18.912
ROTOR PLUS STATOR	T-TOTAL	565.12	564.65	565.48	564.29	564.46	568.54	573.16	565.61
----------	P-STATIC	17.008	17.016	17.014	16.991	16.960	16.920	16.894	
PR = 1.2915	BETABAR	16.385	15.076	13.784	13.611	12.842	10.882	8.253	
TR = 1.0904	EPSILON	0.450	-0.517	-1.479	-2.390	-3.364	-4.501	-5.489	
EFF-A = 0.8383	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8441	V-BAR	333.584	422.927	485.353	472.902	459.025	431.003	365.103	
	VZ-BAR	320.036	408.390	471.376	459.622	447.542	423.250	361.322	
	V-THET-BAR	94.103	109.909	115.638	111.284	102.023	81.375	52.407	
IGV,ROTOR,STATOR	MACH-BAR	0.289	0.368	0.424	0.413	0.400	0.374	0.314	
----------	EFF-POLY	0.815	0.838	0.778	0.751	0.723	0.631	0.530	
PR = 1.2870	INCID-R	11.4	4.6	1.0	1.2	0.7	2.3	9.0	
TR = 1.0904	DEVIATION	15.6	13.8	12.9	13.3	13.5	12.9	11.2	
EFF-A = 0.8295	OMEGA-BAR	0.184	0.104	0.122	0.128	0.136	0.193	0.272	
EFF-P = 0.8326	LOSS PAR	0.049	0.037	0.045	0.049	0.055	0.082	0.119	
	D-FACTOR	0.735	0.598	0.520	0.515	0.516	0.568	0.682	
	TURNING	50.7	42.2	38.0	38.1	39.4	45.0	55.6	

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Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 73)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.376	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29051.0	P-STATIC	14.165	14.165	14.168	14.174	14.182	14.193	14.200	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.881	-2.555	-4.164	-5.758	-7.265	-8.067	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	254.939	254.846	254.173	252.831	250.744	247.943	246.217	
	VZ-BAR	254.939	254.846	254.173	252.831	250.744	247.943	246.217	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.000	0.000	0.000	
	MACH-BAR	0.229	0.229	0.229	0.228	0.226	0.223	0.222	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.631	14.632	14.636	14.667	14.664	14.655	14.649	14.652
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.857	13.865	13.880	13.898	13.915	13.931	13.936	
	BETABAR	22.811	21.502	21.266	21.462	20.529	18.095	13.568	
	EPSILON	-0.000	-0.853	-2.488	-4.080	-5.686	-7.257	-8.118	
	K-BAR	0.960	0.960	0.960	0.960	0.959	0.959	0.960	
	V-BAR	309.934	308.554	305.974	308.532	304.442	299.300	296.685	
	VZ-BAR	285.694	287.077	285.139	287.138	285.108	284.482	288.406	
	V-THET-BAR	120.159	113.098	110.976	112.887	106.761	92.961	69.601	
	MACH-BAR	0.260	0.278	0.276	0.278	0.275	0.270	0.268	
	INCID-P	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-0.3	-2.3	-3.9	-5.0	-7.4	-11.1	-16.4	
	OMEGABAR	0.120	0.117	0.112	0.053	0.059	0.078	0.091	
	TURNING	-22.8	-21.5	-21.3	-21.5	-20.5	-18.1	-13.6	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.631	14.632	14.636	14.667	14.664	14.655	14.649	14.652
WCOR= 2.383	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29051.0	P-STATIC	13.454	13.463	13.474	13.490	13.507	13.522	13.520	
	BETABAR	18.211	17.279	17.254	17.629	16.943	14.956	11.223	
	EPSILON	-1.170	-1.731	-4.110	-6.401	-8.221	-9.075	-6.637	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	384.184	382.848	381.460	383.696	380.250	376.370	375.774	
	VZ-BAR	364.941	365.569	364.294	365.677	363.745	363.609	368.588	
	V-THET-BAR	120.053	113.716	113.145	116.201	110.812	97.132	73.136	
	MACH-BAR	0.348	0.347	0.346	0.348	0.345	0.341	0.340	
	U-WHEEL	636.585	655.533	693.434	731.335	769.236	807.137	826.087	
	V-BAR-IR	632.437	653.617	685.165	715.622	752.224	797.700	838.327	
	BETABAR-PR	54.757	55.990	57.879	59.269	61.080	62.881	63.917	
	V-THET-B-I	-516.521	-541.817	-580.289	-615.134	-658.424	-710.005	-752.951	
	MACH-BAR-P	0.573	0.592	0.621	0.649	0.682	0.723	0.759	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.808	19.537	19.900	19.591	19.165	18.883	18.588	19.463
ROTOR	T-TOTAL	566.39	565.91	566.81	565.85	564.88	571.09	576.26	566.60
-----	P-STATIC	15.176	15.325	15.613	15.849	16.036	16.206	16.298	
PR = 1.3284	BETABAR	65.036	55.027	52.962	54.025	55.410	63.408	81.219	
TR = 1.0923	EPSILON	-2.885	-2.071	-3.792	-5.704	-7.148	-7.415	-6.418	
EFF-A = 0.9180	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9166	V-BAR	636.134	675.016	675.345	631.997	580.434	541.491	505.165	
	VZ-BAR	268.476	386.920	406.796	371.253	329.531	242.399	77.115	
	V-THET-BAR	576.702	552.926	539.080	511.461	477.795	484.182	499.244	
	MACH-BAR	0.562	0.599	0.599	0.559	0.511	0.472	0.437	
	U-WHEEL	629.106	647.560	684.472	721.385	758.297	795.208	813.665	
	V-BAR-IR	273.543	398.345	432.040	426.514	432.814	394.354	323.739	
	BETABAR-PR	11.045	13.720	19.668	29.486	40.409	52.073	76.220	
	V-THET-B-P	-52.404	-94.634	-145.392	-209.924	-280.501	-311.026	-314.420	
	MACH-BAR-P	0.242	0.354	0.383	0.377	0.381	0.384	0.280	
	D-FACTOR	0.818	0.630	0.606	0.628	0.635	0.728	0.839	
	TURNING	43.7	42.3	38.2	29.8	20.7	10.8	-12.3	
	INCID-P	-2.6	-0.1	2.6	3.7	4.2	4.2	4.1	
	DEVIATION	22.9	17.5	11.1	11.8	15.2	20.9	42.4	
	OMEGABAR-P	0.274	0.074	0.015	0.058	0.106	0.256	0.380	
	LOSS PAR	0.094	0.026	0.005	0.020	0.034	0.069	0.041	
	PT-RATIO	1.285	1.335	1.359	1.336	1.307	1.289	1.269	1.3284
	EFF-AD	0.810	0.947	0.988	0.989	0.894	0.745	0.635	0.9180
	EFF-POLY	0.816	0.948	0.988	0.950	0.897	0.753	0.646	0.9186
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.808	19.523	19.903	19.609	19.175	18.895	18.588	19.463
	T-TOTAL	566.39	565.91	566.82	565.92	564.74	570.81	576.28	566.60
	P-STATIC	15.177	15.302	15.556	15.797	15.984	16.144	16.240	
	BETABAR	65.236	55.092	52.610	53.719	54.900	62.364	79.197	
	EPSILON	-0.113	-1.501	-3.103	-4.466	-5.354	-6.452	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	636.003	676.045	680.413	638.052	586.302	549.013	511.919	
	VZ-BAR	266.407	386.890	413.172	377.571	337.134	254.693	95.987	
	V-THET-BAR	577.517	554.160	540.601	514.344	479.665	486.214	502.848	
	MACH-BAR	0.562	0.600	0.604	0.564	0.516	0.479	0.443	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.160	19.103	19.378	19.060	18.716	18.522	18.125	18.951
ROTOR PLUS STATOR	T-TOTAL	566.39	565.92	566.78	566.16	564.61	568.86	576.28	566.60
----------	P-STATIC	17.289	17.292	17.281	17.262	17.240	17.217	17.207	
PR = 1.2935	BETABAR	16.597	14.967	13.794	13.621	12.923	10.938	8.380	
TR = 1.0923	EPSILON	0.450	-0.176	-0.860	-1.485	-2.079	-3.245	-5.489	
EFF-A = 0.8262	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8324	V-BAR	308.007	436.208	468.171	435.717	396.736	375.722	319.469	
	VZ-BAR	295.175	421.430	454.669	423.461	386.687	368.878	316.091	
	V-THET-BAR	87.977	112.557	111.626	102.614	88.730	71.341	46.339	
IGV,ROTOR,STATOR	MACH-BAR	0.266	0.379	0.408	0.379	0.345	0.325	0.273	
----------	EFF-POLY	0.787	0.848	0.797	0.747	0.762	0.888	0.695	
PR = 1.2897	INCID-H	9.6	2.4	1.8	3.2	3.4	8.7	24.4	
TR = 1.0923	DEVIATION	15.8	13.7	12.9	13.3	13.6	12.9	11.3	
EFF-A = 0.8190	OMEGA-BAR	0.179	0.099	0.121	0.144	0.144	0.135	0.197	
EFF-P = 0.8230	LOSS PAR	0.061	0.035	0.045	0.056	0.058	0.057	0.086	
	D-FACTOR	0.789	0.592	0.554	0.583	0.610	0.648	0.775	
	TURNING	48.6	40.1	38.8	40.1	42.0	51.4	70.9	

Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 74)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.460	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24159.0	P-STATIC	14.113	14.114	14.117	14.123	14.131	14.143	14.150	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.907	-2.561	-4.163	-5.716	-7.226	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	267.241	267.129	266.434	265.095	263.043	260.268	258.530	
	VZ-BAR	267.241	267.129	266.434	265.095	263.043	260.268	258.530	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.241	0.241	0.240	0.239	0.237	0.234	0.233	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.624	14.626	14.631	14.664	14.661	14.652	14.646	14.648
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.777	13.784	13.801	13.819	13.837	13.854	13.862	
	BETABAR	20.442	21.236	21.637	21.804	20.950	16.658	7.077	
	EPSILON	-0.000	-0.904	-2.519	-4.096	-5.656	-7.219	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	324.489	323.399	321.142	323.827	319.735	314.451	311.620	
	VZ-BAR	304.055	301.438	298.514	300.661	298.598	301.190	309.246	
	V-THET-BAR	113.331	117.138	118.413	120.281	114.322	90.130	38.392	
	MACH-BAR	0.293	0.292	0.290	0.292	0.289	0.284	0.281	
	INCID-P	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.6	-2.5	-3.5	-4.7	-6.9	-12.6	-22.8	
	OMEGABAR	0.121	0.118	0.111	0.053	0.059	0.077	0.090	
	TURNING	-20.4	-21.2	-21.6	-21.8	-20.9	-16.7	-7.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.624	14.626	14.631	14.665	14.661	14.652	14.646	14.648
WCOR= 2.468	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24159.0	P-STATIC	13.332	13.342	13.358	13.371	13.382	13.389	13.389	
	BETABAR	16.316	17.074	17.563	17.902	17.239	13.644	5.830	
	EPSILON	-1.170	-1.771	-3.120	-4.274	-5.462	-6.408	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	403.086	401.702	399.988	402.809	400.541	398.003	397.194	
	VZ-BAR	386.853	383.997	381.343	383.308	382.547	386.722	395.140	
	V-THET-BAR	113.241	117.940	120.697	123.817	118.705	93.873	40.342	
	MACH-BAR	0.366	0.364	0.363	0.365	0.363	0.361	0.360	
	U-WHEEL	529.388	545.146	576.664	608.183	639.701	671.220	686.979	
	V-BAR-PR	568.185	574.425	594.419	617.689	646.364	694.910	757.809	
	BETABAR-PR	47.089	48.048	50.092	51.642	53.711	56.181	58.572	
	V-THET-B-P	-416.147	-427.205	-455.967	-484.365	-520.997	-577.346	-646.637	
	MACH-BAR-P	0.516	0.521	0.539	0.560	0.586	0.630	0.687	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.104	17.330	17.462	17.403	17.432	17.172	16.972	17.351
ROTOR	T-TOTAL	546.19	546.27	547.60	546.89	545.99	547.88	549.36	546.88
------	P-STATIC	14.221	14.296	14.451	14.603	14.744	14.863	14.921	
PR = 1.1845	BETABAR	47.786	46.069	46.580	45.472	43.402	43.985	39.865	
TR = 1.0583	EPSILON	-2.885	-2.726	-3.324	-4.382	-5.481	-6.211	-6.418	
EFF-A = 0.9149	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.9145	V-BAR	580.640	592.610	588.469	566.505	553.576	515.733	488.255	
	VZ-BAR	390.136	411.152	404.482	397.258	402.200	371.071	374.763	
	V-THET-BAR	430.042	426.775	427.422	403.864	380.371	358.168	312.963	
	MACH-BAR	0.520	0.532	0.527	0.507	0.495	0.459	0.433	
	U-WHEEL	523.168	538.515	569.211	599.908	630.604	661.301	676.649	
	V-BAR-PR	401.097	426.075	428.652	443.040	473.715	479.180	522.221	
	BETABAR-PR	13.425	15.201	19.318	26.259	31.887	39.242	48.191	
	V-THET-B-P	-93.127	-111.740	-141.789	-196.043	-250.234	-303.132	-363.686	
	MACH-BAR-P	0.359	0.382	0.384	0.396	0.423	0.426	0.463	
	D-FACTOR	0.487	0.450	0.473	0.462	0.436	0.479	0.471	
	TURNING	33.7	32.8	30.8	25.4	21.8	16.9	14.4	
	INCID-M	-10.3	-8.1	-5.2	-3.9	-3.2	-2.5	-1.2	
	DEVIATION	25.3	18.9	10.7	8.6	6.7	8.0	10.3	
	OMEGABAR-P	0.142	0.067	0.070	0.058	0.030	0.135	0.191	
	LOSS PAR	0.048	0.023	0.025	0.021	0.011	0.046	0.061	
	PT-RATIO	1.170	1.185	1.193	1.187	1.189	1.172	1.159	1.1845
	EFF-AD	0.865	0.936	0.931	0.937	0.965	0.826	0.729	0.9149
	EFF-POLY	0.867	0.936	0.932	0.937	0.965	0.829	0.733	0.9145
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.104	17.327	17.463	17.403	17.433	17.175	16.972	17.351
	T-TOTAL	546.19	546.26	547.60	546.52	545.98	547.86	549.36	546.88
	P-STATIC	14.233	14.273	14.376	14.503	14.636	14.764	14.828	
	BETABAR	48.022	45.961	45.956	44.681	42.564	43.157	39.098	
	EPSILON	-0.113	-1.008	-2.439	-4.183	-5.676	-7.359	-7.979	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	579.297	594.706	596.296	577.235	565.405	527.558	499.842	
	VZ-BAR	387.461	413.417	414.553	410.424	416.438	384.831	387.914	
	V-THET-BAR	430.649	427.495	428.620	405.886	382.442	360.859	315.222	
	MACH-BAR	0.519	0.534	0.534	0.517	0.506	0.470	0.443	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.557	16.941	17.310	17.269	17.263	16.617	15.870	17.072
ROTOR PLUS STATOR	T-TOTAL	546.19	546.25	547.60	546.47	546.01	548.03	549.36	546.88
----------	P-STATIC	15.321	15.326	15.324	15.302	15.268	15.215	15.187	
PR = 1.1655	BETABAR	13.959	13.382	12.579	12.726	12.415	8.606	3.980	
TR = 1.0583	EPSILON	0.450	-0.076	-1.406	-2.836	-4.032	-5.257	-5.489	
EFF-A = 0.8231	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8269	V-BAR	379.351	430.052	474.462	472.186	475.610	404.348	287.015	
	VZ-BAR	368.148	418.380	463.078	460.588	464.487	399.752	286.323	
	V-THET-BAR	91.513	99.505	103.329	104.013	102.255	60.647	19.921	
IGV,ROTOR,STATOR	MACH-BAR	0.335	0.381	0.421	0.419	0.422	0.357	0.251	
----------	FFF-POLY	0.693	0.758	0.877	0.876	0.808	0.468	0.263	
PR = 1.1618	INCID-M	-7.6	-6.7	-4.9	-5.8	-8.9	-10.5	-15.7	
TR = 1.0543	DEVIATION	13.2	12.1	11.7	12.4	13.0	10.6	6.9	
EFF-A = 0.8084	OMEGA-BAR	0.191	0.127	0.050	0.046	0.061	0.231	0.514	
EFF-P = 0.8097	LOSS PAR	0.066	0.045	0.018	0.018	0.025	0.099	0.226	
	D-FACTOR	0.553	0.477	0.413	0.392	0.367	0.478	0.690	
	TURNING	30.1	32.6	33.4	32.0	30.1	34.6	35.1	

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Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 75)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.386	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24141.0	P-STATIC	14.149	14.149	14.152	14.157	14.166	14.177	14.184	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.592	-4.193	-5.782	-7.295	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	258.907	258.788	258.108	256.791	254.761	252.037	250.376	
	VZ-BAR	258.907	258.788	258.108	256.791	254.761	252.037	250.376	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.233	0.233	0.232	0.231	0.229	0.227	0.225	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.630	14.632	14.635	14.667	14.664	14.655	14.649	14.651
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.831	13.839	13.854	13.871	13.887	13.903	13.911	
	BETABAR	21.111	21.245	21.430	21.608	20.966	18.688	13.690	
	EPSILON	-0.000	-0.910	-2.544	-4.124	-5.729	-7.291	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	314.917	313.726	311.351	313.928	310.099	305.042	302.248	
	VZ-BAR	293.782	292.406	289.826	291.864	289.568	288.943	293.661	
	V-THET-BAR	113.425	113.678	113.756	115.601	110.959	97.739	71.534	
	MACH-BAR	0.284	0.283	0.281	0.283	0.280	0.275	0.273	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.0	-2.5	-3.7	-4.9	-6.9	-10.6	-16.2	
	OMEGABAR	0.118	0.115	0.109	0.052	0.058	0.076	0.089	
	TURNING	-21.1	-21.2	-21.4	-21.6	-21.0	-18.7	-13.7	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.630	14.632	14.636	14.667	14.664	14.655	14.649	14.651
WCOR= 2.394	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24141.0	P-STATIC	13.476	13.426	13.440	13.453	13.464	13.472	13.473	
	BETABAR	16.880	17.109	17.430	17.777	17.297	15.397	11.297	
	EPSILON	-1.170	-1.783	-3.242	-4.426	-5.595	-6.544	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	390.324	388.933	387.107	389.771	387.488	384.739	383.700	
	VZ-BAR	373.507	371.731	369.331	371.161	369.963	370.918	376.265	
	V-THET-BAR	113.335	114.389	115.957	119.003	115.211	102.145	75.167	
	MACH-BAR	0.354	0.353	0.351	0.353	0.351	0.349	0.348	
	U-WHEEL	528.993	544.739	576.235	607.729	639.225	670.720	686.468	
	V-BAR-PR	558.820	568.676	590.141	613.693	641.459	678.871	717.818	
	BETABAR-PR	48.057	49.179	51.255	52.784	54.776	56.879	58.387	
	V-THET-B-P	-415.658	-430.350	-460.278	-488.727	-524.014	-568.574	-611.300	
	MACH-BAR-P	0.507	0.516	0.535	0.556	0.581	0.615	0.650	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.119	17.587	17.603	17.543	17.593	17.332	17.119	17.518
ROTOR	T-TOTAL	547.18	547.43	548.48	547.60	547.55	549.03	550.44	548.05
-----	P-STATIC	14.514	14.617	14.763	14.906	15.039	15.137	15.188	
PR = 1.1957	BETABAR	53.392	48.581	49.511	48.635	46.879	49.031	49.431	
TR = 1.0566	EPSILON	-2.885	-2.568	-3.477	-4.568	-5.675	-6.367	-6.418	
EFF-A = 0.9280	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
EFF-P = 0.9277	V-BAR	550.272	581.861	568.355	546.920	536.908	500.382	471.455	
	VZ-BAR	328.147	384.945	369.040	361.426	367.001	328.080	306.615	
	V-THET-BAR	441.722	436.288	432.241	410.472	391.894	377.816	358.129	
	MACH-BAR	0.491	0.521	0.508	0.488	0.479	0.444	0.417	
	U-WHEEL	522.779	538.114	568.788	599.461	630.134	660.808	676.145	
	V-BAR-PR	338.010	398.192	393.542	407.891	437.568	433.275	441.754	
	BETABAR-PR	13.675	14.810	20.309	27.598	32.988	40.780	46.046	
	V-THET-B-P	-81.057	-101.826	-136.546	-188.989	-238.241	-282.991	-318.015	
	MACH-BAR-P	0.302	0.356	0.351	0.364	0.390	0.385	0.391	
	D-FACTOR	0.599	0.502	0.535	0.524	0.498	0.540	0.559	
	TURNING	34.2	34.4	30.9	25.2	21.8	16.1	12.3	
	INCID-M	-9.3	-7.0	-4.0	-2.8	-2.1	-1.8	-1.4	
	DEVIATION	25.7	18.6	11.7	9.9	7.8	9.6	12.2	
	OMEGABAR-P	0.182	0.027	0.059	0.055	0.034	0.133	0.203	
	LOSS PAR	0.062	0.010	0.021	0.020	0.012	0.044	0.063	
	PT-RATIO	1.170	1.202	1.203	1.196	1.200	1.183	1.169	1.1957
	EFF-AD	0.837	0.976	0.944	0.943	0.962	0.841	0.745	0.9280
	EFF-POLY	0.840	0.975	0.945	0.943	0.962	0.844	0.750	0.9277
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.119	17.580	17.607	17.542	17.594	17.336	17.119	17.518
	T-TOTAL	547.18	547.42	548.47	547.62	547.54	549.00	550.44	548.05
	P-STATIC	14.532	14.599	14.706	14.825	14.948	15.061	15.119	
	BETABAR	53.778	48.553	48.985	47.920	46.069	48.276	48.685	
	EPSILON	-0.113	-0.960	-2.062	-3.383	-4.792	-6.665	-7.979	
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	548.320	583.117	574.813	555.705	547.070	509.740	480.252	
	VZ-BAR	324.014	385.997	377.531	372.410	379.552	339.260	317.062	
	V-THET-BAR	442.346	437.019	433.448	412.447	393.988	380.442	360.714	
	MACH-BAR	0.489	0.522	0.514	0.496	0.488	0.453	0.425	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.650	17.041	17.425	17.423	17.434	16.859	16.237	17.229
ROTOR PLUS STATOR	T-TOTAL	547.18	547.40	548.46	547.62	547.55	549.07	550.44	548.05
----------	P-STATIC	15.557	15.563	15.565	15.549	15.524	15.483	15.458	
PR = 1.1760	BETABAR	14.354	13.414	12.664	13.230	13.227	9.885	4.944	
TR = 1.0566	EPSILON	0.450	-0.039	-1.149	-2.591	-3.865	-5.110	-5.489	
EFF-A = 0.8378	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8415	V-BAR	355.339	409.982	457.312	458.752	463.056	398.080	303.691	
	VZ-BAR	344.246	398.805	446.187	446.576	450.771	392.151	302.561	
	V-THET-BAR	88.094	95.069	100.260	104.991	105.954	68.391	26.173	
IGV,ROTOR,STATOR	MACH-BAR	0.313	0.362	0.405	0.406	0.410	0.351	0.266	
----------	EFF-POLY	0.709	0.672	0.844	0.873	0.803	0.493	0.295	
PR = 1.1725	INCID-M	-1.9	-4.1	-1.9	-2.6	-5.4	-5.4	-6.1	
TR = 1.0566	DEVIATION	13.6	12.1	11.8	12.9	13.9	11.9	7.9	
EFF-A = 0.8244	OMEGA-BAR	0.181	0.181	0.063	0.044	0.060	0.210	0.441	
EFF-P = 0.8261	LOSS PAR	0.062	0.064	0.023	0.017	0.024	0.089	0.194	
	D-FACTOR	0.581	0.509	0.427	0.397	0.375	0.486	0.679	
	TURNING	39.4	35.1	36.3	34.7	32.8	38.4	43.7	

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Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 76)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.274	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.314	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24347.0	P-STATIC	14.183	14.183	14.186	14.191	14.199	14.210	14.217	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.925	-2.588	-4.180	-5.751	-7.246	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	250.611	250.498	249.829	248.498	246.445	243.707	242.004	
	VZ-BAR	250.611	250.498	249.829	248.498	246.445	243.707	242.004	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.226	0.225	0.225	0.224	0.222	0.219	0.218	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.635	14.637	14.639	14.668	14.666	14.658	14.652	14.654
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.888	13.895	13.910	13.925	13.941	13.957	13.963	
	BETABAR	20.612	21.085	21.436	21.665	20.917	17.981	12.466	
	EPSILON	-0.000	-0.892	-2.517	-4.098	-5.682	-7.240	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	304.287	303.066	300.586	303.107	299.325	294.354	291.819	
	VZ-BAR	284.809	282.774	279.756	281.695	279.598	279.955	284.939	
	V-THET-BAR	107.119	109.030	109.840	111.900	106.866	90.867	62.993	
	MACH-BAR	0.275	0.273	0.271	0.273	0.270	0.265	0.263	
	INCID-R	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.5	-2.7	-3.7	-4.8	-7.0	-11.3	-17.5	
	OMEGABAR	0.115	0.113	0.109	0.052	0.057	0.076	0.089	
	TURNING	-20.6	-21.1	-21.4	-21.7	-20.9	-18.0	-12.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.635	14.637	14.639	14.669	14.666	14.657	14.652	14.654
WCOR= 2.320	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24347.0	P-STATIC	13.505	13.514	13.526	13.536	13.546	13.556	13.556	
	BETABAR	16.530	17.024	17.451	17.831	17.252	14.820	10.299	
	EPSILON	-1.170	-1.575	-2.967	-4.422	-5.867	-7.005	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	376.193	374.772	373.204	376.091	374.030	371.168	370.245	
	VZ-BAR	360.646	358.350	356.027	358.024	357.201	358.803	364.280	
	V-THFT-BAR	107.033	109.722	111.920	115.164	110.930	94.939	66.192	
	MACH-BAR	0.341	0.339	0.338	0.341	0.339	0.336	0.335	
	U-WHEEL	533.508	549.388	581.152	612.915	644.679	676.443	692.325	
	V-BAR-PR	558.521	567.210	589.015	613.141	642.252	683.298	724.391	
	BETABAR-PR	49.781	50.817	52.810	54.272	56.207	58.322	59.809	
	V-THFT-B-P	-426.474	-439.666	-469.232	-497.751	-533.750	-581.504	-626.133	
	MACH-BAR-P	0.506	0.514	0.533	0.555	0.582	0.619	0.656	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.148	17.374	17.654	17.634	17.708	17.399	17.221	17.557
ROTOR	T-TOTAL	548.06	548.43	548.91	548.51	548.68	549.77	551.48	548.87
-----	P-STATIC	14.634	14.715	14.891	15.055	15.200	15.323	15.383	
PR = 1.1981	BETABAR	55.038	52.721	50.175	49.978	48.245	50.139	50.893	
TR = 1.0582	EPSILON	-2.885	-2.287	-2.997	-4.353	-5.736	-6.682	-6.418	
EFF-A = 0.9126	K-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
EFF-P = 0.9132	V-BAR	540.039	552.577	559.467	539.534	530.517	485.172	458.488	
	VZ-BAR	309.458	334.698	358.303	346.962	353.295	310.972	289.201	
	V-THFT-BAR	442.580	439.650	429.676	413.174	395.766	372.405	355.772	
	MACH-BAR	0.481	0.493	0.499	0.481	0.472	0.430	0.405	
	U-WHEEL	527.240	542.706	573.641	604.576	635.512	666.447	681.914	
	V-BAR-PR	320.830	350.218	386.178	396.287	426.967	428.057	435.896	
	BETABAR-PR	15.300	17.104	21.886	28.878	34.160	43.395	48.436	
	V-THET-B-P	-84.660	-103.056	-143.965	-191.402	-239.746	-294.042	-326.142	
	MACH-BAR-P	0.286	0.312	0.344	0.353	0.380	0.379	0.385	
	D-FACTOR	0.634	0.590	0.567	0.586	0.521	0.556	0.576	
	TURNING	34.5	33.7	30.9	25.4	22.0	14.9	11.4	
	INCID-R	-7.6	-5.3	-2.5	-1.3	-0.7	-0.3	0.0	
	DEVIATION	27.2	20.8	13.3	11.2	9.0	12.2	14.6	
	OMEGABAR-R	0.209	0.141	0.060	0.059	0.038	0.134	0.203	
	LOSS PAR	0.070	0.048	0.021	0.021	0.013	0.043	0.060	
	PT-RATIO	1.172	1.187	1.206	1.202	1.208	1.187	1.175	1.1981
	EFF-AD	0.819	0.877	0.945	0.941	0.959	0.840	0.749	0.9126
	FFF-POLY	0.822	0.879	0.945	0.941	0.959	0.843	0.753	0.9132
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.148	17.369	17.652	17.633	17.709	17.403	17.221	17.557
	T-TOTAL	548.06	548.42	548.91	548.52	548.67	549.74	551.48	548.87
	P-STATIC	14.644	14.703	14.837	14.978	15.117	15.244	15.305	
	BETABAR	55.344	52.725	49.695	49.245	47.492	49.235	49.879	
	EPSILON	-0.113	-0.977	-2.544	-4.087	-5.578	-7.186	-7.979	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	538.797	553.463	565.078	587.870	539.827	495.207	468.610	
	VZ-BAR	306.385	335.213	365.520	357.658	364.758	323.361	301.973	
	V-THET-BAR	443.205	440.359	430.937	415.018	397.951	375.053	358.340	
	MACH-BAR	0.480	0.494	0.504	0.488	0.481	0.439	0.414	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.751	17.109	17.493	17.468	17.496	16.951	16.531	17.307
ROTOR PLUS STATOR	T-TOTAL	548.06	548.41	548.91	548.52	548.67	549.74	551.48	548.87
----------	P-STATIC	15.760	15.761	15.756	15.739	15.710	15.674	15.659	
PR = 1.1810	BETABAR	14.545	13.796	13.137	13.528	13.256	10.872	7.000	
TR = 1.0582	EPSILON	0.450	-0.113	-1.350	-2.588	-3.739	-4.841	-5.489	
EFF-A = 0.8370	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8408	V-BAR	337.171	390.388	440.564	439.797	446.858	381.986	318.985	
	VZ-BAR	326.365	379.134	429.033	427.595	434.950	375.092	316.608	
	V-THFT-BAR	84.678	93.054	100.133	102.879	102.467	72.148	38.872	
IGV,ROTOR,STATOR	MACH-BAR	0.296	0.344	0.389	0.389	0.395	0.336	0.279	
----------	EFF-POLY	0.757	0.821	0.867	0.839	0.759	0.513	0.359	
PR = 1.1778	INCID-R	-0.3	0.1	-1.1	-1.3	-4.0	-4.8	-4.9	
TR = 1.0582	DEVIATION	13.8	12.5	12.2	13.2	13.9	12.9	9.9	
EFF-A = 0.8248	OMEGA-BAR	0.159	0.098	0.057	0.062	0.082	0.209	0.360	
EFF-P = 0.8269	LOSS PAR	0.058	0.034	0.021	0.024	0.033	0.089	0.158	
	D-FACTOR	0.610	0.523	0.445	0.427	0.403	0.498	0.625	
	TURNING	10.8	38.9	36.6	35.7	34.2	38.4	42.9	

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Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 77)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.208	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24151.0	P-STATIC	14.230	14.231	14.233	14.238	14.245	14.254	14.260	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.930	-2.567	-4.172	-5.726	-7.258	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	238.513	238.405	237.803	236.597	234.745	232.261	230.707	
	VZ-BAR	238.513	238.405	237.803	236.597	234.745	232.261	230.707	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.215	0.214	0.214	0.213	0.211	0.209	0.207	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.642	14.642	14.644	14.671	14.669	14.661	14.656	14.658
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.967	13.973	13.985	14.000	14.014	14.027	14.034	
	BETABAR	20.280	20.972	21.427	21.747	20.772	17.396	11.245	
	EPSILON	-0.000	-0.910	-2.525	-4.098	-5.691	-7.247	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	288.906	287.745	285.388	287.813	284.404	279.598	277.046	
	VZ-BAR	270.998	268.683	265.662	267.330	265.917	266.780	271.728	
	V-THET-BAR	100.135	102.987	104.258	106.636	100.865	83.591	54.023	
	MACH-BAR	0.260	0.259	0.257	0.259	0.256	0.252	0.250	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.8	-2.8	-3.7	-4.8	-7.1	-11.8	-18.7	
	OMEGABAR	0.113	0.112	0.109	0.052	0.056	0.076	0.089	
	TURNING	-20.3	-21.0	-21.4	-21.7	-20.8	-17.4	-11.2	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.642	14.642	14.645	14.671	14.669	14.661	14.656	14.658
WCOR= 2.213	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24151.0	P-STATIC	13.622	13.630	13.641	13.651	13.660	13.666	13.666	
	BETABAR	16.288	16.961	17.485	17.938	17.177	14.350	9.304	
	EPSILON	-1.170	-1.637	-3.120	-4.548	-5.678	-6.495	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	356.741	355.359	353.753	356.405	354.479	351.984	351.115	
	VZ-BAR	342.422	339.902	337.407	339.081	338.667	340.983	346.496	
	V-THET-BAR	100.056	103.663	106.289	109.766	104.685	87.234	56.767	
	MACH-BAR	0.323	0.321	0.320	0.322	0.321	0.318	0.318	
	U-WHEEL	529.213	544.965	576.473	607.981	639.490	670.998	686.752	
	V-BAR-PR	549.025	557.033	578.723	602.660	633.023	676.060	718.986	
	BETABAR-PR	51.414	52.395	54.335	55.760	57.655	59.708	61.189	
	V-THET-B-P	-429.157	-441.302	-470.184	-498.216	-534.805	-583.764	-629.985	
	MACH-BAR-P	0.497	0.504	0.524	0.545	0.573	0.611	0.650	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.192	17.520	17.819	17.668	17.672	17.534	17.368	17.637
ROTOR	T-TOTAL	549.30	549.09	549.88	549.09	549.63	551.39	553.04	549.87
-----	P-STATIC	14.759	14.862	15.053	15.204	15.346	15.468	15.526	
PR = 1.2032	BETABAR	58.513	53.723	51.599	52.201	51.662	52.678	52.359	
TR = 1.0601	EPSILON	-2.885	-2.262	-3.144	-4.418	-5.575	-6.409	-6.418	
EFF-A = 0.9054	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9058	V-BAR	530.627	550.381	557.573	526.397	510.825	482.760	457.699	
	VZ-BAR	277.148	325.669	346.344	322.628	316.867	292.694	279.525	
	V-THET-BAR	452.497	443.615	436.958	415.938	400.671	383.910	362.429	
	MACH-BAR	0.472	0.490	0.497	0.468	0.453	0.427	0.403	
	U-WHEEL	522.995	538.337	569.023	599.709	630.395	661.082	676.425	
	V-BAR-PR	285.973	339.176	370.708	371.350	391.401	403.118	420.389	
	BETABAR-PR	14.272	16.204	20.871	29.663	35.940	43.439	48.324	
	V-THET-B-P	-70.498	-94.722	-132.065	-183.771	-229.725	-277.172	-313.996	
	MACH-BAR-P	0.254	0.302	0.330	0.330	0.347	0.356	0.370	
	D-FACTOR	0.702	0.609	0.574	0.585	0.577	0.596	0.604	
	TURNING	37.1	36.2	33.5	26.1	21.7	16.3	12.9	
	INCID-M	-6.0	-3.7	-0.9	0.2	0.8	1.1	1.4	
	DEVIATION	26.1	19.9	12.3	12.0	10.7	12.2	14.5	
	OMEGABAR-P	0.251	0.122	0.047	0.071	0.080	0.151	0.213	
	LOSS PAR	0.085	0.042	0.017	0.025	0.027	0.048	0.063	
	PT-RATIO	1.174	1.197	1.217	1.204	1.205	1.196	1.185	1.2032
	EFF-AD	0.797	0.899	0.960	0.932	0.918	0.833	0.752	0.9054
	EFF-POLY	0.800	0.900	0.960	0.933	0.919	0.837	0.757	0.9058
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.192	17.513	17.819	17.671	17.672	17.536	17.368	17.637
	T-TOTAL	549.30	549.09	549.88	549.10	549.60	551.37	553.04	549.87
	P-STATIC	14.770	14.849	15.002	15.139	15.272	15.396	15.454	
	BETABAR	58.869	53.755	51.112	51.492	50.855	51.835	51.432	
	EPSILON	-0.113	-1.083	-2.320	-4.036	-5.136	-6.580	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	529.375	551.128	562.960	534.003	519.346	491.688	466.888	
	VZ-BAR	273.689	325.871	353.422	332.481	327.859	303.829	291.079	
	V-THET-BAR	453.136	444.374	438.197	417.870	402.776	386.582	365.045	
	MACH-BAR	0.471	0.491	0.502	0.475	0.461	0.435	0.412	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.882	17.198	17.548	17.505	17.460	17.102	16.836	17.359
POTOR PLUS STATOR	T-TOTAL	549.30	549.09	549.87	549.11	549.61	551.41	553.04	549.87
-----------------	P-STATIC	15.967	15.972	15.971	15.956	15.933	15.900	15.881	
PR = 1.1843	BETABAR	14.410	14.125	13.581	13.799	13.363	12.086	9.028	
TR = 1.0601	EPSILON	0.450	-0.187	-1.290	-2.504	-3.780	-4.972	-5.489	
EFF-A = 0.8238	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8280	V-BAR	322.845	371.181	418.763	415.059	412.785	389.494	331.639	
	VZ-BAR	312.689	359.962	407.055	403.079	401.608	361.304	327.531	
	V-THET-BAR	80.342	90.567	98.330	98.999	95.404	77.364	52.039	
IGV,ROTOR,STATOR	MACH-BAR	0.283	0.327	0.369	0.366	0.364	0.324	0.290	
----------------	EFF-POLY	0.810	0.799	0.803	0.846	0.776	0.559	0.466	
PR = 1.1813	INCID-M	3.2	1.1	0.3	1.0	-0.7	-1.8	-3.3	
TR = 1.0601	DEVIATION	13.6	12.8	12.7	13.4	14.0	14.1	12.0	
EFF-A = 0.8140	OMEGA-BAR	0.128	0.118	0.096	0.066	0.088	0.203	0.278	
EFF-P = 0.8159	LOSS PAR	0.044	0.042	0.036	0.025	0.036	0.086	0.121	
	D-FACTOR	0.640	0.560	0.488	0.463	0.458	0.524	0.590	
	TURNING	44.5	39.6	37.5	37.7	37.5	39.7	42.4	

Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 78)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.131	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24257.0	P-STATIC	14.253	14.254	14.256	14.261	14.268	14.277	14.283	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.925	-2.580	-4.765	-5.747	-7.234	-8.067	
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	232.421	232.332	231.698	230.479	228.589	226.062	224.482	
	VZ-BAR	232.421	232.332	231.698	230.479	228.589	226.062	224.482	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.209	0.209	0.208	0.207	0.206	0.203	0.202	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.646	14.646	14.648	14.672	14.671	14.663	14.658	14.661
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.019	14.024	14.036	14.050	14.063	14.076	14.081	
	BETABAR	20.285	20.873	21.228	21.530	20.782	17.667	10.687	
	EPSILON	-0.000	-0.892	-2.506	-4.081	-5.676	-7.227	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	278.369	277.075	274.710	277.049	273.685	268.964	266.657	
	VZ-BAR	261.105	258.891	256.070	257.718	255.879	256.249	262.067	
	V-THET-BAR	96.508	98.721	99.466	101.673	97.105	81.626	49.266	
	MACH-BAR	0.251	0.250	0.247	0.250	0.247	0.242	0.240	
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.8	-2.9	-3.9	-5.0	-7.1	-11.6	-19.3	
	OMEGABAR	0.110	0.110	0.106	0.051	0.058	0.075	0.087	
	TURNING	-20.3	-20.9	-21.2	-21.5	-20.8	-17.7	-10.6	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.646	14.646	14.648	14.673	14.671	14.663	14.658	14.661
WCOR= 2.136	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24257.0	P-STATIC	13.700	13.707	13.716	13.726	13.737	13.745	13.745	
	BETABAR	16.320	16.899	17.321	17.766	17.210	14.617	8.837	
	EPSILON	-1.170	-1.572	-3.422	-5.318	-6.956	-7.370	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	343.173	341.799	340.467	342.982	340.738	337.758	336.997	
	VZ-BAR	329.346	327.040	325.028	326.626	325.482	326.802	332.997	
	V-THET-BAR	96.431	99.355	101.363	104.655	100.817	85.234	51.768	
	MACH-BAR	0.310	0.309	0.308	0.310	0.308	0.305	0.305	
	U-WHEEL	531.535	547.357	579.003	610.650	642.296	673.943	689.766	
	V-BAR-PR	545.697	554.677	577.744	602.262	631.778	673.339	719.673	
	BETABAR-PR	52.877	53.870	55.764	57.156	58.989	60.962	62.438	
	V-THET-B-P	-435.104	-448.002	-477.641	-505.995	-541.479	-588.708	-637.998	
	MACH-BAR-P	0.493	0.501	0.522	0.544	0.571	0.609	0.650	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.236	17.593	17.879	17.807	17.719	17.404	17.427	17.693
ROTOR	T-TOTAL	550.03	549.63	550.39	549.57	550.49	552.64	554.18	550.51
-----	P-STATIC	14.858	14.946	15.131	15.291	15.426	15.552	15.613	
PR = 1.2069	BETABAR	60.416	54.060	51.861	51.468	52.936	57.787	53.787	
TR = 1.0613	EPSILON	-2.885	-2.080	-3.124	-4.811	-6.368	-6.729	-6.418	
EFF-A = 0.9030	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9027	V-BAR	523.898	548.244	554.867	530.278	506.639	458.321	453.747	
	VZ-BAR	258.647	321.801	342.672	330.334	305.380	244.294	268.068	
	V-THET-BAR	455.599	443.769	436.409	418.817	408.218	387.775	366.095	
	MACH-BAR	0.465	0.488	0.494	0.472	0.449	0.404	0.399	
	U-WHEEL	525.291	540.700	571.520	602.341	633.163	663.983	679.394	
	V-BAR-PR	267.871	336.092	368.364	379.872	381.754	368.779	412.331	
	BETABAR-PR	15.080	16.748	21.518	29.581	36.872	48.493	49.449	
	V-THET-B-P	-69.691	-96.931	-135.111	-187.524	-228.948	-276.208	-313.298	
	MACH-BAR-P	0.238	0.299	0.328	0.338	0.338	0.325	0.363	
	D-FACTOR	0.738	0.615	0.581	0.576	0.599	0.655	0.621	
	TURNING	37.8	37.1	34.2	27.6	22.1	12.5	13.0	
	INCID-M	-4.5	-2.3	0.5	1.6	2.1	2.3	2.7	
	DEVIATION	26.9	20.5	12.9	11.9	11.7	17.3	15.6	
	OMEGABAR-P	0.269	0.121	0.048	0.046	0.092	0.214	0.228	
	LOSS PAR	0.091	0.042	0.017	0.016	0.031	0.062	0.066	
	PT-RATIO	1.177	1.201	1.220	1.213	1.208	1.187	1.189	1.2069
	EFF-AD	0.789	0.903	0.960	0.956	0.906	0.768	0.742	0.9030
	EFF-POLY	0.793	0.904	0.960	0.956	0.907	0.773	0.747	0.9027
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.236	17.586	17.877	17.808	17.729	17.405	17.427	17.693
	T-TOTAL	550.03	549.63	550.38	549.56	550.43	552.61	554.18	550.51
	P-STATIC	14.865	14.936	15.088	15.238	15.364	15.484	15.542	
	BETABAR	60.734	54.762	51.474	50.973	52.080	56.730	52.822	
	EPSILON	-0.113	-1.237	-2.688	-4.068	-5.342	-7.104	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	522.997	548.563	559.255	536.217	514.709	467.168	462.797	
	VZ-BAR	255.672	321.202	348.343	337.652	316.345	256.260	279.667	
	V-THET-BAR	456.243	444.574	437.520	416.557	405.978	390.601	368.738	
	MACH-BAR	0.465	0.489	0.498	0.477	0.457	0.412	0.408	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	16.963	17.300	17.625	17.538	17.468	17.168	16.973	17.419
ROTOR PLUS STATOR	T-TOTAL	550.03	549.63	550.36	549.63	550.24	552.45	554.18	550.51
-----------------	P-STATIC	16.105	16.106	16.101	16.088	16.069	16.047	16.033	
PR = 1.1882	BETABAR	14.616	14.263	13.826	13.929	13.516	11.998	8.843	
TR = 1.0613	EPSILON	0.450	-0.177	-1.021	-1.895	-2.785	-4.475	-5.489	
EFF-A = 0.8234	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8277	V-BAR	311.829	365.266	410.701	400.919	394.658	356.194	327.785	
	VZ-BAR	301.738	354.010	398.802	389.131	383.728	348.405	323.889	
	V-THET-BAR	78.687	89.975	98.144	96.506	92.242	74.061	50.389	
IGV,ROTOR,STATOR	MACH-BAR	0.273	0.321	0.362	0.353	0.347	0.312	0.286	
----------------	EFF-POLY	0.833	0.820	0.821	0.774	0.767	0.736	0.580	
PR = 1.1854	INCID-M	5.1	1.5	0.6	0.5	0.6	3.1	-2.0	
TR = 1.0613	DEVIATION	13.8	13.0	12.9	13.6	14.1	14.0	11.8	
EFF-A = 0.8151	OMEGA-BAR	0.115	0.108	0.090	0.105	0.110	0.123	0.241	
EFF-P = 0.8167	LOSS PAR	0.040	0.038	0.033	0.041	0.044	0.052	0.105	
	D-FACTOR	0.660	0.569	0.498	0.495	0.493	0.538	0.600	
	TURNING	46.1	39.9	37.6	37.0	38.6	44.7	44.0	

Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 79)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.065	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24197.0	P-STATIC	14.282	14.283	14.285	14.289	14.295	14.303	14.308	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.584	-4.176	-5.757	-7.258	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	W-BAR	224.565	224.476	223.918	222.790	221.051	218.732	217.280	
	WZ-BAR	224.565	224.476	223.918	222.790	221.051	218.732	217.280	
	W-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.202	0.202	0.201	0.200	0.199	0.197	0.195	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.649	14.649	14.651	14.674	14.673	14.665	14.661	14.663
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.079	14.084	14.094	14.106	14.118	14.130	14.135	
	BETABAR	20.375	20.737	20.975	21.391	20.841	17.964	10.108	
	EPSILON	-0.000	-0.879	-2.511	-4.107	-5.683	-7.247	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	W-BAR	265.216	263.975	261.899	264.321	261.288	256.657	254.187	
	WZ-BAR	248.623	246.874	244.545	246.113	244.193	244.112	250.242	
	W-THET-BAR	92.337	93.467	93.750	96.404	92.959	79.755	44.608	
	MACH-BAR	0.239	0.238	0.236	0.238	0.235	0.231	0.229	
	INCID-R	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-2.7	-3.0	-4.2	-5.1	-7.0	-11.3	-19.8	
	OMEGABAR	0.110	0.111	0.107	0.051	0.054	0.075	0.088	
	TURNING	-20.4	-20.7	-21.0	-21.4	-20.8	-18.0	-10.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.649	14.649	14.651	14.674	14.673	14.665	14.661	14.663
WCOR= 2.069	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24197.0	P-STATIC	13.790	13.797	13.805	13.813	13.822	13.829	13.829	
	BETABAR	16.411	16.811	17.147	17.688	17.299	14.880	8.396	
	EPSILON	-1.170	-1.494	-3.260	-5.109	-6.425	-6.992	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	W-BAR	326.563	325.230	324.110	326.646	324.666	321.894	321.030	
	WZ-BAR	313.259	311.331	309.704	311.205	309.980	311.073	317.589	
	W-THET-BAR	92.263	94.062	95.554	99.248	96.543	82.656	46.874	
	MACH-BAR	0.295	0.294	0.293	0.295	0.293	0.291	0.290	
	U-WHEEL	530.221	546.003	577.571	609.139	640.708	672.276	688.060	
	W-BAR-RR	538.459	548.801	572.941	597.365	626.265	666.651	715.529	
	BETABAR-RR	54.425	55.437	57.278	58.602	60.331	62.182	63.650	
	W-THET-R-P	-437.957	-451.941	-482.017	-509.895	-544.165	-589.619	-641.186	
	MACH-BAR-P	0.486	0.496	0.517	0.540	0.566	0.602	0.646	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.280	17.684	17.951	17.872	17.778	17.621	17.456	17.783
ROTOR	T-TOTAL	550.39	550.25	550.39	549.82	550.44	552.99	555.27	550.78
-----	P-STATIC	15.003	15.100	15.291	15.449	15.584	15.710	15.770	
PR = 1.2128	BETABAR	63.165	55.714	52.381	52.649	54.147	57.505	58.279	
TR = 1.0618	EPSILON	-2.885	-1.933	-3.139	-4.698	-6.068	-6.603	-6.418	
EFF-A = 0.9193	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9184	W-BAR	511.548	540.109	544.248	518.935	494.115	462.883	436.768	
	WZ-BAR	230.928	304.279	332.212	314.837	289.414	248.685	229.643	
	W-THET-BAR	456.457	446.093	431.093	412.518	400.471	390.403	371.524	
	MACH-BAR	0.454	0.480	0.484	0.461	0.438	0.408	0.384	
	U-WHEEL	523.991	539.362	570.107	600.852	631.596	662.341	677.713	
	W-BAR-RR	240.601	318.262	360.156	366.874	370.411	368.564	382.736	
	BETABAR-PR	16.301	17.022	22.704	30.887	38.614	47.551	53.130	
	W-THET-R-P	-67.534	-93.269	-139.014	-188.334	-231.125	-271.938	-306.188	
	MACH-BAR-R	0.213	0.283	0.320	0.326	0.328	0.325	0.336	
	D-FACTOR	0.788	0.649	0.592	0.595	0.612	0.654	0.667	
	TURNING	38.1	38.4	34.6	27.7	21.7	14.6	10.5	
	INCID-R	-3.0	-0.7	2.0	3.1	3.4	3.5	3.9	
	DEVIATION	28.2	20.8	14.1	13.2	13.4	16.3	19.3	
	OMEGABAR-P	0.276	0.117	0.026	0.037	0.078	0.176	0.251	
	LOSS PAR	0.093	0.040	0.009	0.013	0.026	0.052	0.067	
	PT-RATIO	1.180	1.207	1.225	1.218	1.212	1.202	1.191	1.2128
	EFF-AD	0.792	0.910	0.979	0.966	0.923	0.816	0.726	0.9193
	EFF-POLY	0.796	0.911	0.978	0.966	0.924	0.820	0.732	0.9184
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.280	17.676	17.950	17.876	17.780	17.624	17.456	17.783
	T-TOTAL	550.39	550.25	550.40	549.83	550.40	552.94	555.27	550.78
	P-STATIC	15.006	15.088	15.251	15.397	15.522	15.643	15.702	
	BETABAR	63.422	55.797	52.035	52.102	53.299	56.470	57.060	
	EPSILON	-0.113	-1.476	-2.632	-4.086	-5.051	-6.764	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	W-BAR	511.115	540.628	548.429	525.110	501.667	471.697	445.889	
	WZ-BAR	228.682	303.925	337.381	322.551	299.817	260.557	242.459	
	W-THET-BAR	457.102	446.938	432.375	414.368	402.210	393.202	374.206	
	MACH-BAR	0.453	0.481	0.488	0.467	0.445	0.416	0.392	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.965	17.331	17.663	17.528	17.428	17.221	17.049	17.430
ROTOR PLUS STATOR	T-TOTAL	550.39	550.25	550.40	549.85	550.30	552.80	555.27	550.78
----------	P-STATIC	16.200	16.205	16.204	16.189	16.170	16.145	16.130	
PR = 1.1887	BETABAR	14.744	14.444	14.021	14.076	13.661	11.841	8.548	
TR = 1.0618	EPSILON	0.450	-0.298	-1.276	-2.128	-3.217	-4.664	-5.489	
EFF-A = 0.8187	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8231	W-BAR	294.334	354.355	407.220	385.027	374.159	348.266	323.717	
	WZ-BAR	284.644	343.760	389.266	373.466	363.573	340.854	320.121	
	W-THET-BAR	74.906	88.368	97.208	93.644	88.370	71.464	48.118	
IGV,ROTOR,STATOR	MACH-BAR	0.258	0.311	0.353	0.339	0.329	0.305	0.282	
----------	EFF-POLY	0.805	0.783	0.788	0.715	0.677	0.586	0.532	
PR = 1.1862	INCID-R	7.8	3.1	1.2	1.6	1.8	2.8	2.3	
TR = 1.0618	DEVIATION	14.0	13.1	13.1	13.7	14.3	13.8	11.5	
EFF-A = 0.8115	OMEGA-BAR	0.138	0.133	0.106	0.141	0.156	0.204	0.232	
EFF-P = 0.8129	LOSS PAR	0.047	0.047	0.039	0.054	0.063	0.086	0.101	
	D-FACTOR	0.689	0.587	0.503	0.514	0.518	0.563	0.602	
	TURNING	48.7	41.4	38.0	38.0	39.6	44.6	48.5	

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Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 80)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.048	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24202.0	P-STATIC	14.297	14.297	14.299	14.303	14.309	14.317	14.322	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.924	-2.584	-4.166	-5.742	-7.258	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	220.498	220.406	219.861	218.765	217.078	214.790	213.362	
	VZ-BAR	220.498	220.406	219.861	218.765	217.078	214.790	213.362	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.198	0.198	0.198	0.197	0.195	0.193	0.192	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.650	14.649	14.651	14.674	14.673	14.666	14.661	14.663
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.091	14.095	14.106	14.117	14.129	14.140	14.145	
	BETABAR	19.576	20.760	20.961	21.387	20.643	17.377	10.603	
	EPSILON	-0.000	-0.879	-2.528	-4.093	-5.695	-7.247	-8.118	
	K-BAR	0.962	0.962	0.962	0.962	0.961	0.961	0.962	
	V-BAR	262.465	261.296	259.293	261.737	258.786	254.258	251.853	
	VZ-BAR	247.295	244.331	242.134	243.714	242.171	242.623	247.552	
	V-THET-BAR	87.939	92.616	92.757	95.485	91.235	75.932	46.383	
	MACH-BAR	0.236	0.235	0.233	0.236	0.233	0.229	0.227	
	INCID-P	12.3	13.1	14.7	16.3	17.7	19.0	19.6	
	DEVIATION	-3.5	-3.0	-4.2	-5.1	-7.2	-11.9	-19.3	
	OMEGABAR	0.112	0.113	0.109	0.052	0.055	0.076	0.090	
	TURNING	-19.6	-20.8	-21.0	-21.4	-20.6	-17.4	-10.6	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.650	14.649	14.652	14.674	14.673	14.666	14.661	14.663
WCOR= 2.052	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24202.0	P-STATIC	13.807	13.814	13.822	13.830	13.839	13.845	13.845	
	BETABAR	15.763	16.828	17.133	17.683	17.130	14.402	8.809	
	EPSILON	-1.170	-1.437	-3.115	-4.887	-6.319	-7.005	-6.637	
	K-BAR	0.962	0.962	0.962	0.962	0.962	0.962	0.962	
	V-BAR	323.462	322.082	320.902	323.479	321.560	316.853	317.993	
	VZ-BAR	311.299	308.289	306.661	308.195	307.295	308.811	314.283	
	V-THET-BAR	87.869	93.242	94.534	98.257	94.715	79.302	48.697	
	MACH-BAR	0.292	0.291	0.290	0.292	0.290	0.288	0.287	
	U-WHEEL	530.330	546.116	577.690	609.265	640.840	672.415	688.202	
	V-BAR-PR	540.998	547.851	572.263	596.756	626.648	668.696	712.542	
	BETABAR-PR	54.871	55.755	57.595	58.904	60.633	62.494	63.831	
	V-THET-B-P	-442.461	-452.874	-483.156	-511.008	-546.125	-593.113	-639.505	
	MACH-BAR-P	0.489	0.495	0.517	0.539	0.566	0.604	0.643	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.280	17.697	18.020	17.942	17.797	17.630	17.456	17.820
ROTOR	T-TOTAL	550.50	550.54	550.87	549.66	549.88	552.90	555.53	550.77
-----	P-STATIC	15.013	15.109	15.301	15.466	15.596	15.717	15.776	
PR = 1.2153	BETABAR	62.613	56.055	52.264	51.464	52.543	56.567	59.472	
TR = 1.0618	EPSILON	-2.885	-2.246	-3.079	-4.680	-5.980	-6.632	-6.418	
EFF-A = 0.9299	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
EFF-P = 0.9286	V-BAR	510.388	540.458	549.692	523.718	494.540	463.106	436.092	
	VZ-BAR	234.780	301.827	336.422	326.275	300.769	255.175	221.515	
	V-THET-BAR	453.183	448.194	434.716	409.664	392.556	386.441	375.643	
	MACH-BAR	0.453	0.481	0.489	0.465	0.438	0.408	0.383	
	U-WHEEL	524.100	539.474	570.225	600.976	631.727	662.478	677.853	
	V-BAR-PR	245.256	315.333	362.727	378.252	384.297	375.991	374.700	
	BETABAR-PR	16.807	16.813	21.933	30.384	38.493	47.250	53.759	
	V-THET-B-P	-70.917	-91.280	-135.508	-191.312	-239.171	-276.036	-302.210	
	MACH-BAR-P	0.218	0.280	0.323	0.336	0.341	0.332	0.329	
	D-FACTOR	0.781	0.656	0.590	0.574	0.587	0.643	0.678	
	TURNING	38.1	38.9	35.7	28.5	22.1	15.2	10.1	
	INCID-M	-2.5	-0.4	2.3	3.4	3.7	3.9	4.1	
	DEVIATION	28.7	20.6	13.3	12.7	13.3	16.0	19.9	
	OMEGABAR-P	0.279	0.125	0.021	0.010	0.055	0.171	0.259	
	LOSS PAR	0.093	0.043	0.008	0.004	0.018	0.051	0.069	
	PT-RATIO	1.180	1.208	1.230	1.223	1.213	1.202	1.191	1.2153
	EFF-AD	0.789	0.905	0.983	0.991	0.985	0.821	0.721	0.9299
	EFF-POLY	0.793	0.906	0.982	0.990	0.985	0.824	0.727	0.9286
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.280	17.690	18.018	17.946	17.801	17.634	17.456	17.820
	T-TOTAL	550.50	550.54	550.88	549.69	549.82	552.84	555.53	550.77
	P-STATIC	15.019	15.096	15.258	15.408	15.532	15.650	15.707	
	BETABAR	62.927	56.090	51.913	50.900	51.707	55.536	58.179	
	EPSILON	-0.113	-1.319	-2.803	-4.185	-4.757	-6.720	-7.979	
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	509.669	541.222	554.147	530.531	502.317	471.900	445.280	
	VZ-BAR	231.964	301.985	341.824	334.589	319.278	267.056	234.782	
	V-THET-BAR	453.823	448.985	436.155	411.720	394.241	389.051	378.354	
	MACH-BAR	0.452	0.481	0.493	0.472	0.446	0.416	0.391	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	16.965	17.355	17.688	17.555	17.444	17.240	17.063	17.452
ROTOR PLUS STATOR	T-TOTAL	550.50	550.55	550.88	549.73	549.76	552.64	555.53	550.77
-----------------	P-STATIC	16.219	16.223	16.222	16.206	16.186	16.161	16.146	
PR = 1.1902	BETABAR	14.287	14.132	13.974	14.116	13.497	11.539	8.392	
TR = 1.0618	EPSILON	0.450	-0.321	-1.435	-2.352	-3.302	-4.655	-5.489	
EFF-A = 0.8248	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8291	V-BAR	290.723	354.998	402.029	386.234	373.856	348.634	323.334	
	VZ-BAR	281.732	344.257	390.131	374.571	363.529	341.586	319.872	
	V-THET-BAR	71.744	86.665	97.082	94.199	87.260	69.742	47.191	
IGV,ROTOR,STATOR	MACH-BAR	0.254	0.312	0.354	0.340	0.329	0.305	0.282	
----------------	EFF-POLY	0.806	0.789	0.767	0.693	0.674	0.600	0.546	
PR = 1.1876	INCID-M	7.3	3.4	1.1	0.4	0.2	1.9	3.4	
TR = 1.0618	DEVIATION	13.5	12.8	13.1	13.8	14.1	13.5	11.3	
EFF-A = 0.8177	OMEGA-BAR	0.139	0.129	0.120	0.154	0.157	0.198	0.225	
EFF-P = 0.8190	LOSS PAR	0.048	0.046	0.044	0.059	0.063	0.084	0.098	
	D-FACTOR	0.695	0.589	0.509	0.514	0.514	0.560	0.607	
	TURNING	48.6	42.0	37.9	36.8	38.2	44.0	49.8	

Table C-5. Scaled Stage with IGV-10 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 81)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG	
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979		
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694	
WCOR= 2.022	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70	
NCOR=24223.0	P-STATIC	14.300	14.300	14.302	14.306	14.312	14.320	14.325		
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
	EPSILON	-0.000	-0.856	-2.467	-4.107	-5.755	-7.304	-8.067		
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971		
	V-BAR	219.750	219.673	219.149	218.060	216.286	213.870	212.415		
	VZ-BAR	219.750	219.673	219.149	218.060	216.286	213.870	212.415		
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000		
	MACH-BAR	0.196	0.197	0.197	0.196	0.194	0.192	0.191		
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848		
	P-TOTAL	14.651	14.650	14.652	14.675	14.674	14.666	14.662	14.664	
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70	
	P-STATIC	14.105	14.108	14.118	14.130	14.142	14.153	14.157		
	BETABAR	19.216	20.463	20.945	21.462	20.912	17.317	8.494		
	EPSILON	-0.000	-0.832	-2.412	-4.019	-5.702	-7.303	-8.118		
	K-BAR	0.960	0.960	0.960	0.960	0.959	0.959	0.960		
	V-BAR	259.775	258.546	256.479	258.841	255.783	251.268	249.123		
	VZ-BAR	245.303	242.232	239.532	240.893	238.934	239.839	246.390		
	V-THET-BAR	85.499	90.386	91.685	94.706	91.298	74.788	36.797		
	MACH-BAR	0.234	0.233	0.231	0.233	0.230	0.226	0.224		
	INCID-M	12.3	13.1	14.7	16.3	17.7	19.0	19.6		
	DEVIATION	-3.9	-3.3	-4.2	-5.0	-7.0	-11.9	-21.4		
	OMEGABAR	0.110	0.112	0.107	0.051	0.054	0.075	0.088		
	TURNING	-19.2	-20.5	-20.9	-21.5	-20.9	-17.3	-8.5		
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517		
	P-TOTAL	14.651	14.650	14.653	14.675	14.674	14.666	14.662	14.664	
WCOR= 2.027	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70	
NCOR=24223.0	P-STATIC	13.626	13.833	13.640	13.646	13.857	13.865	13.865		
	BETABAR	15.495	16.613	17.128	17.742	17.350	14.350	7.066		
	EPSILON	-1.170	-1.301	-3.075	-5.099	-6.745	-7.510	-6.637		
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960		
	V-BAR	319.626	318.412	317.390	319.983	317.929	314.989	314.232		
	VZ-BAR	306.206	305.120	303.314	304.765	303.464	305.131	311.844		
	V-THET-BAR	85.431	91.035	93.473	97.508	94.609	78.066	38.666		
	MACH-BAR	0.289	0.287	0.287	0.289	0.287	0.284	0.284		
	U-WHEEL	530.790	546.590	578.192	609.794	641.396	672.999	688.799		
	V-BAR-PR	541.666	548.299	571.799	596.589	625.182	668.623	721.054		
	BETABAR-PR	55.315	56.186	57.963	59.250	60.960	62.645	64.375		
	V-THET-B-P	-445.360	-455.554	-484.719	-512.286	-546.587	-594.933	-650.133		
	MACH-BAR-P	0.489	0.495	0.516	0.538	0.564	0.604	0.651		
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419		
	P-TOTAL	17.295	17.713	18.087	17.981	17.820	17.618	17.456	17.857	
ROTOR	T-TOTAL	550.60	550.59	550.72	550.62	550.22	553.58	556.05	550.95	
	P-STATIC	15.670	15.163	15.357	15.521	15.655	15.777	15.835		
PR = 1.2178	BETABAR	63.360	56.316	51.756	52.284	53.955	58.357	59.702		
TR = 1.0622	EPSILON	-2.885	-2.066	-3.028	-4.940	-6.247	-6.819	-6.418		
EFF-A = 0.9349	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980		
EFF-P = 0.9332	V-BAR	505.159	535.992	549.747	521.534	490.133	454.315	428.276		
	VZ-BAR	226.509	297.289	340.300	319.047	288.420	238.375	216.066		
	V-THET-BAR	451.530	445.827	431.760	412.562	396.252	386.746	369.779		
	MACH-BAR	0.448	0.476	0.489	0.483	0.434	0.400	0.376		
	U-WHEEL	524.554	539.941	570.719	601.497	632.275	663.053	678.441		
	V-BAR-PR	237.990	311.835	367.611	370.757	372.742	365.050	376.772		
	BETABAR-PR	17.869	17.553	22.208	30.633	39.303	49.204	55.008		
	V-THET-B-P	-73.024	-94.115	-136.959	-188.936	-236.023	-276.306	-308.663		
	MACH-BAR-P	0.211	0.277	0.327	0.329	0.330	0.321	0.330		
	D-FACTOR	0.795	0.662	0.580	0.589	0.607	0.666	0.682		
	TURNING	37.4	36.6	35.8	28.6	21.7	13.6	9.4		
	INCID-M	-2.1	0.1	2.7	3.7	4.1	4.2	4.6		
	DEVIATION	29.7	21.3	13.6	13.0	14.1	18.0	21.2		
	OMEGABAR-P	0.277	0.122	-0.006	0.011	0.059	0.189	0.266		
	LOSS PAR	0.092	0.042	-0.002	0.004	0.019	0.054	0.068		
	PT-RATIO	1.180	1.209	1.234	1.225	1.215	1.201	1.191	1.2178	
	EFF-AD	0.790	0.908	1.006	0.990	0.941	0.802	0.710	0.9349	
	EFF-POLY	0.794	0.909	1.004	0.990	0.941	0.805	0.717	0.9332	
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373		
	P-TOTAL	17.295	17.706	18.085	17.987	17.825	17.623	17.456	17.857	
	T-TOTAL	550.60	550.59	550.72	550.04	550.16	553.49	556.05	550.95	
	P-STATIC	15.677	15.154	15.316	15.470	15.599	15.714	15.771		
	BETABAR	63.717	56.436	51.433	51.760	53.152	57.311	58.462		
	EPSILON	-0.113	-1.398	-2.948	-3.794	-5.229	-6.627	-7.979		
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980		
	V-BAR	504.305	536.249	553.938	527.742	497.245	462.899	436.996		
	VZ-BAR	223.310	296.523	345.341	326.650	298.208	250.022	228.576		
	V-THET-BAR	452.168	446.623	433.111	414.700	397.872	389.563	372.448		
	MACH-BAR	0.447	0.477	0.493	0.489	0.441	0.408	0.383		
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226		
	P-TOTAL	16.965	17.370	17.705	17.570	17.447	17.239	17.076	17.463	
ROTOR PLUS STATOR	T-TOTAL	550.60	550.59	550.72	550.08	550.01	553.05	556.05	550.95	
	P-STATIC	16.297	16.299	16.293	16.278	16.260	16.239	16.228		
PR = 1.1909	BETABAR	14.629	14.272	13.906	13.754	13.051	11.298	7.844		
TR = 1.0622	EPSILON	0.450	-0.499	-1.483	-2.208	-2.944	-4.207	-5.489		
EFF-A = 0.8232	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920		
EFF-P = 0.8275	V-BAR	274.720	344.875	394.104	377.691	362.875	335.329	310.655		
	VZ-BAR	265.814	334.236	382.554	366.861	353.501	328.830	307.748		
	V-THET-BAR	69.381	85.000	94.712	89.800	81.946	65.694	42.396		
IGV,ROTOR,STATOR	MACH-BAR	0.240	0.303	0.347	0.332	0.319	0.293	0.271		
	EFF-POLY	0.801	0.790	0.743	0.681	0.669	0.630	0.564		
PR = 1.1884	INCID-M	8.1	3.8	0.6	1.3	1.6	3.7	3.7		
TR = 1.0622	DEVIATION	13.8	13.0	13.0	13.4	13.7	13.3	10.8		
EFF-A = 0.8165	OMEGA-BAR	0.149	0.132	0.137	0.166	0.170	0.201	0.226		
EFF-P = 0.8177	LOSS PAR	0.051	0.046	0.051	0.064	0.069	0.085	0.099		
	D-FACTOR	0.724	0.604	0.523	0.533	0.539	0.588	0.628		
	TURNING	49.1	42.2	37.5	38.0	40.1	46.0	50.6		

Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Data Point No. 82)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 3.045	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34210.0	P-STATIC	13.818	13.819	13.825	13.834	13.848	13.867	13.878	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.068	-2.695	-4.214	-5.824	-7.259	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	329.360	329.176	328.156	326.349	323.571	319.930	317.679	
	VZ-BAR	329.360	329.176	328.156	326.349	323.571	319.930	317.679	
	V-THET-BAR	0.000	0.001	0.001	0.000	0.001	0.000	0.000	
	MACH-BAR	0.298	0.297	0.296	0.295	0.292	0.289	0.287	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.508	14.462	14.374	14.530	14.538	14.525	14.513	14.490
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	12.824	12.847	12.897	12.955	13.010	13.061	13.087	
	BETABAR	28.655	30.472	31.557	31.229	30.817	29.610	24.390	
	EPSILON	-0.000	-1.051	-2.651	-4.155	-5.776	-7.284	-8.118	
	K-BAR	0.975	0.975	0.975	0.975	0.974	0.974	0.975	
	V-BAR	464.650	455.182	436.013	448.258	441.130	431.512	425.898	
	VZ-BAR	407.742	392.311	371.536	383.305	378.847	375.138	387.889	
	V-THET-BAR	222.812	230.814	228.185	232.405	225.989	213.209	175.874	
	MACH-BAR	0.423	0.415	0.397	0.408	0.401	0.392	0.387	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.4	-3.3	-3.6	-5.3	-7.1	-9.6	-15.5	
	OMEGABAR	0.213	0.266	0.368	0.191	0.185	0.205	0.222	
	TURNING	-28.7	-30.5	-31.6	-31.2	-30.8	-29.6	-24.4	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.508	14.461	14.375	14.532	14.538	14.525	14.513	14.490
WCOR= 3.066	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34210.0	P-STATIC	12.078	12.107	12.154	12.195	12.234	12.268	12.278	
	BETABAR	23.256	24.720	25.490	25.695	25.389	24.301	20.046	
	EPSILON	-1.170	-1.726	-3.123	-4.472	-5.635	-6.412	-6.637	
	K-BAR	0.975	0.975	0.975	0.975	0.975	0.975	0.975	
	V-BAR	563.856	555.369	540.137	551.760	547.431	541.671	539.154	
	VZ-BAR	518.042	504.476	487.562	497.199	494.560	493.662	506.491	
	V-THET-BAR	222.635	232.233	232.447	239.233	234.713	222.910	184.806	
	MACH-BAR	0.518	0.510	0.495	0.507	0.502	0.497	0.494	
	U-WHEEL	749.632	771.946	816.577	861.209	905.840	950.471	972.787	
	V-BAR-PR	738.981	738.787	760.879	796.284	833.676	879.239	936.721	
	BETABAR-PR	45.491	46.932	50.148	51.361	53.612	55.840	57.268	
	V-THET-B-P	-526.997	-539.712	-584.130	-621.975	-671.127	-727.561	-787.980	
	MACH-BAR-P	0.679	0.679	0.698	0.731	0.765	0.807	0.859	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.308	19.515	19.827	19.949	20.050	19.862	19.690	19.842
ROTOR	T-TOTAL	569.53	569.22	571.09	570.20	573.43	575.80	577.42	572.07
	P-STATIC	13.199	13.342	13.670	13.990	14.295	14.595	14.744	
PR = 1.3694	BETABAR	49.398	48.964	48.870	48.377	49.658	50.776	48.512	
TR = 1.1029	EPSILON	-2.885	-2.539	-2.906	-4.206	-5.360	-6.207	-6.418	
EFF-A = 0.9152	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.9171	V-BAR	839.359	839.048	831.573	812.647	796.641	763.488	741.817	
	VZ-BAR	546.255	550.858	546.983	539.782	515.712	482.791	491.427	
	V-THET-BAR	637.283	632.895	626.357	607.478	607.178	591.461	555.691	
	MACH-BAR	0.757	0.757	0.748	0.730	0.712	0.678	0.656	
	U-WHEEL	740.825	762.556	806.023	849.490	892.958	936.426	958.159	
	V-BAR-PR	565.982	565.936	575.780	591.589	589.624	593.393	635.202	
	BETABAR-PR	10.733	13.244	18.182	24.148	28.994	35.544	39.317	
	V-THET-B-P	-103.542	-129.661	-179.667	-242.012	-285.780	-344.964	-402.468	
	MACH-BAR-P	0.502	0.511	0.518	0.532	0.527	0.527	0.562	
	D-FACTOR	0.442	0.427	0.438	0.440	0.478	0.508	0.497	
	TURNING	34.8	33.7	32.0	27.2	24.6	20.3	18.0	
	INCID-M	-11.9	-9.2	-5.1	-4.2	-3.3	-2.8	-2.5	
	DEVIATION	22.6	17.0	9.6	6.5	3.8	4.3	5.5	
	OMEGABAR-P	0.151	0.094	0.054	0.048	0.089	0.144	0.175	
	LOSS PAR	0.052	0.033	0.019	0.018	0.033	0.051	0.061	
	PT-RATIO	1.331	1.349	1.379	1.372	1.379	1.368	1.357	1.3694
	EFF-AD	0.869	0.918	0.953	0.954	0.912	0.850	0.805	0.9152
	EFF-POLY	0.874	0.921	0.954	0.955	0.916	0.856	0.813	0.9171
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.308	19.511	19.821	19.945	20.050	19.865	19.690	19.842
	T-TOTAL	569.53	569.21	571.08	570.17	573.35	575.78	577.42	572.07
	P-STATIC	13.248	13.327	13.548	13.805	14.063	14.334	14.486	
	BETABAR	49.802	49.001	48.331	47.518	48.464	49.376	47.173	
	EPSILON	-0.113	-0.777	-2.159	-3.592	-5.310	-6.920	-7.979	
	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
	V-BAR	835.518	839.940	840.658	826.726	814.706	784.674	763.150	
	VZ-BAR	539.270	551.038	558.892	558.337	540.224	510.896	518.780	
	V-THET-BAR	638.183	633.919	627.967	609.701	609.831	595.564	559.706	
	MACH-BAR	0.754	0.758	0.758	0.744	0.730	0.699	0.677	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.015	18.569	19.364	19.602	19.499	18.984	18.603	19.217
ROTOR PLUS STATOR	T-TOTAL	569.53	569.19	571.05	570.12	573.25	575.78	577.42	572.07
	P-STATIC	16.411	16.417	16.416	16.392	16.345	16.277	16.236	
PR = 1.3262	BETABAR	8.609	8.900	9.299	10.120	10.199	8.095	5.027	
TR = 1.1029	EPSILON	0.450	0.157	-0.990	-2.265	-3.555	-4.915	-5.489	
EFF-A = 0.8165	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8237	V-BAR	424.142	485.995	562.283	584.146	581.909	545.315	514.372	
	VZ-BAR	419.363	480.140	554.892	575.058	572.713	539.871	512.393	
	V-THET-BAR	63.490	75.206	90.865	102.641	103.043	76.810	45.073	
IGV,ROTOR,STATOR	MACH-BAR	0.367	0.423	0.491	0.512	0.508	0.474	0.445	
	EFF-POLY	0.754	0.807	0.890	0.908	0.845	0.735	0.666	
PR = 1.3078	INCID-M	-5.9	-3.6	-2.5	-3.0	-3.0	-4.3	-7.6	
TR = 1.1029	DEVIATION	7.8	7.6	8.4	9.8	10.8	10.1	8.0	
EFF-A = 0.7760	OMEGA-BAR	0.213	0.152	0.073	0.056	0.092	0.159	0.209	
EFF-P = 0.7828	LOSS PAR	0.075	0.055	0.027	0.022	0.038	0.068	0.092	
	D-FACTOR	0.736	0.663	0.576	0.540	0.547	0.595	0.628	
	TURNING	41.2	40.1	39.0	37.4	38.3	41.3	42.1	

Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 83)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.964	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34184.0	P-STATIC	13.867	13.868	13.873	13.882	13.896	13.913	13.924	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.099	-2.730	-4.228	-5.831	-7.265	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	319.850	319.661	318.644	316.888	314.178	310.671	308.494	
	VZ-BAR	319.850	319.661	318.644	316.888	314.178	310.671	308.494	
	V-THET-BAR	0.000	0.001	0.000	0.001	0.000	0.000	0.000	
	MACH-BAR	0.289	0.289	0.288	0.286	0.284	0.280	0.278	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.523	14.481	14.404	14.542	14.548	14.535	14.523	14.506
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	12.966	12.987	13.032	13.086	13.136	13.184	13.207	
	BETABAR	28.334	29.980	31.413	31.247	30.818	29.462	24.361	
	EPSILON	-0.000	-1.081	-2.678	-4.169	-5.770	-7.277	-8.118	
	K-BAR	0.980	0.980	0.980	0.980	0.979	0.979	0.980	
	V-BAR	445.745	436.886	419.137	430.173	423.301	413.924	408.387	
	VZ-BAR	392.342	378.431	357.707	367.771	363.532	360.376	372.027	
	V-THET-BAR	211.558	218.299	218.453	223.145	216.860	203.585	168.452	
	MACH-BAR	0.406	0.397	0.381	0.391	0.385	0.376	0.371	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.7	-3.8	-3.7	-5.3	-7.1	-9.8	-15.6	
	OMEGABAR	0.207	0.258	0.354	0.188	0.183	0.204	0.223	
	TURNING	-28.3	-30.0	-31.4	-31.2	-30.8	-29.5	-24.4	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.523	14.481	14.405	14.543	14.548	14.535	14.523	14.506
WCOR= 3.002	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34184.0	P-STATIC	12.286	12.312	12.354	12.391	12.427	12.457	12.467	
	BETABAR	23.077	24.410	25.480	25.788	25.464	24.249	20.073	
	EPSILON	-1.170	-1.744	-3.057	-4.424	-5.625	-6.468	-6.637	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	539.294	531.386	517.221	527.977	523.843	518.304	515.724	
	VZ-BAR	496.138	483.886	466.914	475.396	472.955	472.558	484.396	
	V-THET-BAR	211.389	219.591	222.505	229.692	225.223	212.868	177.007	
	MACH-BAR	0.495	0.487	0.473	0.484	0.480	0.474	0.472	
	U-WHEEL	749.063	771.359	815.957	860.554	905.151	949.749	972.048	
	V-BAR-PR	731.605	733.903	755.119	789.934	828.252	875.396	930.983	
	BETABAR-PR	47.301	48.750	51.804	52.998	55.177	57.326	58.647	
	V-THET-B-P	-537.673	-551.768	-593.451	-630.862	-679.928	-736.881	-795.041	
	MACH-BAR-P	0.671	0.673	0.691	0.724	0.759	0.801	0.852	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.763	19.880	20.132	20.338	20.470	20.353	19.999	20.235
ROTOR	T-TOTAL	572.13	571.92	573.46	572.88	575.45	578.93	580.01	574.62
	P-STATIC	13.753	13.906	14.247	14.584	14.904	15.217	15.368	
PR = 1.3950	BETABAR	51.917	51.811	51.991	51.373	52.151	53.873	52.563	
TR = 1.1078	EPSILON	-2.885	-2.214	-2.785	-4.025	-5.266	-6.169	-6.418	
EFF-A = 0.9271	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.9289	V-BAR	822.422	816.638	805.014	789.769	774.098	744.637	710.691	
	VZ-BAR	507.275	504.889	495.712	493.016	474.977	439.018	432.018	
	V-THET-BAR	647.340	641.860	634.285	616.986	611.241	601.454	564.307	
	MACH-BAR	0.739	0.733	0.720	0.706	0.689	0.658	0.625	
	U-WHEEL	740.262	761.977	805.411	848.845	892.280	935.714	957.430	
	V-BAR-PR	515.716	519.009	524.463	544.854	551.914	551.806	584.111	
	BETABAR-PR	10.380	13.382	19.043	25.184	30.613	37.284	42.301	
	V-THET-B-P	-92.922	-120.117	-171.126	-231.860	-281.038	-334.260	-393.123	
	MACH-BAR-P	0.463	0.466	0.469	0.487	0.491	0.488	0.514	
	D-FACTOR	0.501	0.497	0.510	0.504	0.527	0.563	0.556	
	TURNING	36.9	35.4	32.8	27.8	24.6	20.0	16.3	
	INCID-M	-10.1	-7.4	-3.5	-2.6	-1.7	-1.3	-1.1	
	DEVIATION	22.2	17.1	10.4	7.5	5.4	6.1	8.5	
	OMEGABAR-P	0.131	0.093	0.059	0.042	0.066	0.132	0.179	
	LOSS PAR	0.045	0.033	0.021	0.015	0.024	0.046	0.059	
	PT-RATIO	1.361	1.373	1.397	1.398	1.407	1.400	1.377	1.3950
	EFF-AD	0.894	0.924	0.951	0.962	0.937	0.870	0.810	0.9271
	EFF-POLY	0.898	0.927	0.953	0.963	0.940	0.876	0.818	0.9289
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.763	19.876	20.125	20.331	20.468	20.358	19.999	20.235
	T-TOTAL	572.13	571.91	573.45	572.86	575.35	578.89	580.01	574.62
	P-STATIC	13.816	13.912	14.152	14.429	14.695	14.979	15.124	
	BETABAR	52.470	51.974	51.541	50.594	50.966	52.439	51.023	
	EPSILON	-0.113	-0.547	-1.916	-3.394	-4.737	-6.900	-7.979	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	817.438	815.976	811.978	801.443	790.123	763.973	731.129	
	VZ-BAR	497.967	502.651	505.006	508.766	497.611	465.719	459.884	
	V-THET-BAR	648.254	642.773	635.826	619.248	613.735	605.607	568.381	
	MACH-BAR	0.734	0.732	0.727	0.717	0.704	0.677	0.644	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.103	18.855	19.689	19.970	19.936	19.585	19.043	19.629
ROTOR PLUS STATOR	T-TOTAL	572.13	571.88	573.41	572.80	575.15	578.86	580.01	574.62
	P-STATIC	16.917	16.926	16.933	16.916	16.876	16.813	16.771	
PR = 1.3532	BETABAR	8.865	9.233	9.833	10.473	10.418	7.967	5.355	
TR = 1.1078	EPSILON	0.450	0.329	-0.755	-2.051	-3.368	-4.813	-5.489	
EFF-A = 0.8372	K-BAR	0.885	0.885	0.885	0.885	0.885	0.885	0.885	
EFF-P = 0.8441	V-BAR	363.066	456.133	539.038	564.568	566.792	544.703	498.417	
	VZ-BAR	358.729	450.216	531.119	555.163	557.446	539.433	496.242	
	V-THET-BAR	55.952	73.224	92.055	102.620	102.495	75.522	46.517	
IGV,ROTOR,STATOR	MACH-BAR	0.313	0.395	0.469	0.493	0.494	0.472	0.430	
	EFF-POLY	0.697	0.787	0.891	0.898	0.844	0.749	0.677	
PR = 1.3358	INCID-M	-3.2	-0.7	0.7	0.1	-0.5	-1.2	-3.8	
TR = 1.1078	DEVIATION	8.1	7.9	8.9	10.1	11.0	9.9	8.3	
EFF-A = 0.8010	OMEGA-BAR	0.279	0.171	0.073	0.061	0.092	0.144	0.196	
EFF-P = 0.8080	LOSS PAR	0.098	0.061	0.027	0.024	0.038	0.062	0.086	
	D-FACTOR	0.813	0.694	0.592	0.554	0.554	0.592	0.638	
	TURNING	43.6	42.7	41.7	40.1	40.5	44.5	45.7	

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Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 84)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.887	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34259.0	P-STATIC	13.912	13.913	13.918	13.926	13.939	13.956	13.966	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.136	-2.795	-4.257	-5.865	-7.288	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	310.962	310.797	309.768	308.048	305.385	301.941	299.846	
	VZ-BAR	310.982	310.797	309.768	308.048	305.385	301.941	299.846	
	V-THET-BAR	0.000	0.001	0.000	0.001	0.000	0.000	0.000	
	MACH-BAR	0.281	0.280	0.280	0.278	0.276	0.272	0.270	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.535	14.496	14.427	14.552	14.557	14.544	14.531	14.518
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.100	13.122	13.166	13.213	13.260	13.304	13.324	
	BETABAR	27.959	29.640	31.350	31.099	30.711	29.684	24.748	
	EPSILON	-0.000	-1.096	-2.703	-4.175	-5.805	-7.270	-8.118	
	K-BAR	0.990	0.990	0.990	0.990	0.989	0.989	0.990	
	V-BAR	426.955	418.125	400.901	411.661	404.947	395.804	390.567	
	VZ-BAR	377.124	363.414	342.373	352.497	348.155	343.845	354.697	
	V-THET-BAR	200.172	206.769	208.571	212.627	206.808	196.008	163.503	
	MACH-BAR	0.388	0.380	0.364	0.374	0.367	0.359	0.354	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-5.1	-4.1	-3.8	-5.4	-7.2	-9.6	-15.2	
	OMEGABAR	0.204	0.253	0.344	0.185	0.181	0.204	0.224	
	TURNING	-28.0	-29.6	-31.3	-31.1	-30.7	-29.7	-24.7	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.535	14.496	14.427	14.553	14.557	14.544	14.531	14.518
WCOR= 2.922	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34259.0	P-STATIC	12.487	12.510	12.547	12.581	12.616	12.648	12.656	
	BETABAR	22.880	24.219	25.479	25.738	25.453	24.535	20.479	
	EPSILON	-1.170	-1.763	-3.296	-4.927	-6.392	-6.999	-6.637	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	514.430	506.906	493.721	503.881	499.656	493.776	491.067	
	VZ-BAR	473.955	462.288	445.703	453.892	451.159	449.179	460.031	
	V-THET-BAR	200.013	207.938	212.389	218.812	214.735	205.038	171.807	
	MACH-BAR	0.471	0.464	0.451	0.461	0.457	0.451	0.448	
	U-WHEEL	750.706	773.051	817.746	862.442	907.138	951.833	974.181	
	V-BAR-PR	726.565	730.124	751.744	787.582	826.425	871.479	924.696	
	BETABAR-PR	49.283	50.715	53.636	54.807	56.911	58.972	60.173	
	V-THET-B-P	-550.693	-565.113	-605.357	-643.630	-692.403	-746.795	-802.374	
	MACH-BAR-P	0.665	0.668	0.687	0.720	0.755	0.796	0.845	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.793	20.045	20.409	20.562	20.574	20.268	20.072	20.374
ROTOR	T-TOTAL	574.15	573.66	575.35	574.40	576.96	580.87	582.40	576.23
	P-STATIC	14.040	14.199	14.558	14.895	15.208	15.510	15.655	
PR = 1.4033	BETABAR	54.203	53.091	53.130	52.327	53.849	57.300	55.860	
TR = 1.1109	EPSILON	-2.885	-2.018	-2.696	-4.116	-5.686	-6.448	-6.418	
EFF-A = 0.9166	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.9205	V-BAR	802.915	804.086	797.475	779.266	757.253	716.627	692.516	
	VZ-BAR	469.642	482.885	478.485	476.246	446.722	387.147	388.649	
	V-THET-BAR	651.236	642.941	637.980	616.802	611.413	603.051	573.176	
	MACH-BAR	0.718	0.719	0.712	0.694	0.671	0.630	0.606	
	U-WHEEL	741.887	763.649	807.178	850.708	894.237	937.767	959.531	
	V-BAR-PR	478.311	497.765	507.550	530.596	528.769	511.840	548.012	
	BETABAR-PR	10.925	14.032	19.473	26.157	32.345	40.838	44.830	
	V-THET-B-P	-90.650	-120.707	-169.198	-233.906	-282.824	-334.716	-386.355	
	MACH-BAR-P	0.428	0.445	0.453	0.473	0.469	0.450	0.480	
	D-FACTOR	0.557	0.530	0.538	0.548	0.560	0.615	0.599	
	TURNING	38.4	36.7	34.2	28.7	24.6	18.1	15.3	
	INCID-M	-8.1	-5.4	-1.0	-0.7	0.0	0.3	0.4	
	DEVIATION	22.8	17.8	10.9	8.5	7.2	9.6	11.0	
	OMEGABAR-P	0.176	0.107	0.058	0.040	0.080	0.176	0.209	
	LOSS PAR	0.061	0.037	0.021	0.014	0.028	0.059	0.066	
	PT-RATIO	1.362	1.383	1.414	1.412	1.414	1.394	1.381	1.4033
	EFF-AD	0.863	0.916	0.954	0.965	0.926	0.831	0.788	0.9186
	EFF-POLY	0.869	0.919	0.955	0.966	0.929	0.838	0.797	0.9205
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.793	20.036	20.399	20.557	20.582	20.275	20.072	20.374
	T-TOTAL	574.15	573.66	575.32	574.41	576.82	580.81	582.40	576.23
	P-STATIC	14.103	14.213	14.470	14.758	15.035	15.316	15.461	
	BETABAR	54.823	53.349	52.701	51.653	52.705	55.963	54.507	
	EPSILON	-0.113	-0.320	-1.838	-3.554	-5.109	-6.713	-7.479	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	797.862	802.490	803.659	789.574	771.110	733.016	709.063	
	VZ-BAR	459.648	479.040	486.996	489.872	467.229	410.284	411.680	
	V-THET-BAR	652.156	643.817	639.298	619.234	613.424	607.436	577.313	
	MACH-BAR	0.713	0.718	0.718	0.705	0.685	0.646	0.622	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.162	18.991	19.938	20.139	20.002	19.568	19.234	19.760
ROTOR PLUS STATOR	T-TOTAL	574.15	573.64	575.18	574.45	576.34	580.59	582.40	576.23
	P-STATIC	17.238	17.243	17.247	17.232	17.196	17.146	17.117	
PR = 1.3610	BETABAR	12.455	11.369	10.335	10.460	10.270	8.259	5.953	
TR = 1.1109	EPSILON	0.450	0.507	-0.334	-1.601	-2.779	-4.480	-5.489	
EFF-A = 0.8301	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.8373	V-BAR	319.641	432.179	529.528	548.312	541.006	508.312	478.829	
	VZ-BAR	312.119	423.715	520.938	539.200	532.337	503.033	476.247	
	V-THET-BAR	68.937	85.095	94.495	99.542	96.454	73.032	49.661	
IGV,ROTOR,STATOR	MACH-BAR	0.274	0.373	0.460	0.477	0.470	0.439	0.412	
	EFF-POLY	0.699	0.782	0.887	0.880	0.838	0.766	0.703	
PR = 1.3447	INCID-M	-0.8	0.7	1.9	1.1	1.2	2.3	-0.3	
TR = 1.1109	DEVIATION	11.7	10.1	9.4	10.1	10.9	10.2	8.9	
EFF-A = 0.7977	OMEGA-BAR	0.287	0.179	0.078	0.072	0.104	0.142	0.182	
EFF-P = 0.8045	LOSS PAR	0.099	0.064	0.029	0.028	0.043	0.061	0.080	
	D-FACTOR	0.858	0.713	0.599	0.571	0.579	0.628	0.658	
	TURNING	42.4	42.0	42.4	41.2	42.4	47.7	48.6	

Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 85)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.788	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34170.0	P-STATIC	13.967	13.968	13.973	13.981	13.993	14.008	14.018	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.167	-2.818	-4.289	-5.897	-7.279	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	299.519	299.334	298.329	296.655	294.078	290.781	288.756	
	VZ-BAR	299.519	299.334	298.329	296.655	294.078	290.781	288.756	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.001	0.000	
	MACH-BAR	0.270	0.270	0.269	0.268	0.265	0.262	0.260	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.549	14.514	14.453	14.564	14.568	14.555	14.543	14.533
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.177	13.198	13.242	13.287	13.331	13.374	13.392	
	BETABAR	27.123	29.588	31.345	31.038	30.793	29.671	24.665	
	EPSILON	-0.000	-1.128	-2.726	-4.198	-5.815	-7.275	-8.118	
	K-BAR	0.975	0.975	0.975	0.975	0.974	0.974	0.975	
	V-BAR	416.958	408.524	392.297	401.674	394.898	385.814	380.875	
	VZ-BAR	371.105	355.251	335.041	344.164	339.229	335.208	346.125	
	V-THET-BAR	190.093	201.693	204.069	207.107	202.159	190.987	158.944	
	MACH-BAR	0.379	0.371	0.356	0.364	0.358	0.350	0.345	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-6.0	-4.2	-3.8	-5.5	-7.1	-9.6	-15.3	
	OMEGABAR	0.200	0.249	0.335	0.182	0.180	0.204	0.224	
	TURNING	-27.1	-29.6	-31.3	-31.0	-30.8	-29.7	-24.7	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.549	14.514	14.453	14.565	14.568	14.555	14.543	14.533
WCOR= 2.819	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34170.0	P-STATIC	12.598	12.619	12.653	12.685	12.719	12.751	12.759	
	BETABAR	22.270	24.237	25.534	25.716	25.544	24.555	20.440	
	EPSILON	-1.170	-1.622	-3.262	-5.082	-6.734	-7.327	-6.637	
	K-BAR	0.975	0.975	0.975	0.975	0.975	0.975	0.975	
	V-BAR	501.197	494.061	482.040	491.155	486.788	480.798	478.243	
	VZ-BAR	463.811	450.509	434.960	442.510	439.209	437.304	448.132	
	V-THET-BAR	189.941	202.804	207.776	213.116	209.901	199.798	167.016	
	MACH-BAR	0.458	0.451	0.440	0.449	0.444	0.439	0.436	
	U-WHEEL	748.756	771.043	815.622	860.201	904.781	949.360	971.650	
	V-BAR-PR	726.219	725.168	747.446	783.927	822.055	867.807	921.009	
	BETABAR-PR	50.308	51.592	54.412	55.633	57.703	59.738	60.885	
	V-THET-B-P	-568.814	-568.239	-607.844	-647.085	-694.880	-749.562	-804.633	
	MACH-BAR-P	0.664	0.662	0.682	0.716	0.751	0.792	0.840	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.602	20.088	20.559	20.667	20.660	20.218	20.026	20.448
ROTOR	T-TOTAL	576.28	575.41	576.44	574.84	578.44	582.02	585.20	577.36
PR = 1.4070	P-STATIC	14.209	14.384	14.762	15.111	15.424	15.725	15.871	
TR = 1.1131	BETABAR	57.751	55.300	54.316	53.188	55.949	60.316	60.799	
EFF-A = 0.9086	EPSILON	-2.885	-1.922	-2.555	-4.229	-5.915	-6.641	-6.418	
EFF-P = 0.9106	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	779.817	793.164	790.762	768.760	746.129	696.018	672.356	
	VZ-BAR	416.108	451.533	461.261	460.632	417.799	344.710	328.026	
	V-THET-BAR	659.522	652.077	642.294	615.475	618.129	604.652	586.909	
	MACH-BAR	0.694	0.707	0.704	0.684	0.660	0.610	0.586	
	U-WHEEL	739.959	761.665	805.082	848.498	891.914	935.331	957.038	
	V-BAR-PR	423.811	464.664	489.180	516.229	499.595	477.815	494.567	
	BETABAR-PR	10.941	13.634	19.436	26.834	33.248	43.803	48.451	
	V-THET-B-P	-80.437	-109.589	-162.787	-233.022	-273.785	-330.679	-370.129	
	MACH-BAR-P	0.377	0.414	0.436	0.459	0.442	0.419	0.431	
	D-FACTOR	0.640	0.580	0.564	0.546	0.599	0.658	0.665	
	TURNING	39.4	38.0	35.0	28.8	24.5	15.9	12.4	
	INCID-M	-7.1	-4.5	-0.9	0.1	0.8	1.1	1.1	
	DEVIATION	22.8	17.4	10.8	9.2	8.1	12.6	14.6	
	OMEGABAR-P	0.263	0.146	0.062	0.035	0.097	0.203	0.256	
	LOSS PAR	0.090	0.051	0.022	0.012	0.034	0.064	0.077	
	PT-RATIO	1.347	1.384	1.422	1.418	1.418	1.389	1.377	1.4070
	EFF-AD	0.801	0.890	0.952	0.970	0.912	0.807	0.747	0.9086
	EFF-POLY	0.809	0.895	0.954	0.971	0.916	0.816	0.758	0.9106
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.602	20.073	20.550	20.663	20.672	20.226	20.026	20.448
	T-TOTAL	576.28	575.42	576.44	574.81	578.31	581.93	585.20	577.36
	P-STATIC	14.268	14.395	14.682	14.990	15.278	15.562	15.704	
	BETABAR	58.457	56.599	53.948	52.556	54.884	59.002	59.371	
	EPSILON	-0.113	-0.299	-1.915	-3.582	-4.978	-6.746	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	774.956	791.409	796.435	777.873	758.272	710.240	686.994	
	VZ-BAR	405.410	447.132	468.713	472.937	436.195	365.794	350.011	
	V-THET-BAR	660.454	652.959	643.904	617.589	620.208	608.792	591.145	
	MACH-BAR	0.689	0.706	0.710	0.693	0.672	0.623	0.600	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.206	19.072	20.129	20.168	19.989	19.564	19.381	19.822
ROTOR PLUS STATOR	T-TOTAL	576.28	575.46	576.41	574.91	577.64	581.43	585.20	577.36
PR = 1.3639	P-STATIC	17.463	17.466	17.468	17.451	17.418	17.375	17.350	
TR = 1.1131	BETABAR	13.520	12.104	10.574	10.294	9.842	7.943	5.989	
EFF-A = 0.8200	EPSILON	0.450	0.473	-0.391	-1.547	-2.570	-4.229	-5.489	
EFF-P = 0.8277	K-BAR	0.885	0.885	0.885	0.885	0.885	0.885	0.885	
	V-BAR	286.314	413.289	524.293	528.893	517.345	482.536	467.841	
	VZ-BAR	278.380	404.124	515.390	520.381	509.730	477.902	465.288	
IGV,ROTOR,STATOR	V-THET-BAR	66.937	86.532	96.208	94.509	88.436	66.686	48.809	
	MACH-BAR	0.245	0.356	0.455	0.459	0.448	0.415	0.401	
PR = 1.3490	EFF-POLY	0.731	0.788	0.893	0.858	0.814	0.783	0.751	
TR = 1.1131	INCID-M	2.8	2.9	3.1	2.0	3.4	5.4	4.6	
EFF-A = 0.7917	DEVIATION	12.7	10.8	9.7	9.9	10.5	9.9	8.9	
EFF-P = 0.7983	OMEGA-BAR	0.262	0.176	0.072	0.087	0.127	0.142	0.150	
	LOSS PAR	0.090	0.062	0.027	0.034	0.052	0.061	0.066	
	D-FACTOR	0.902	0.736	0.605	0.591	0.611	0.658	0.672	
	TURNING	44.9	43.5	43.4	42.3	45.0	51.1	53.4	

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Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 86)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WLOK= 2.715	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34248.0	P-STATIC	14.007	14.008	14.012	14.020	14.031	14.046	14.055	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.186	-2.839	-4.311	-5.902	-7.305	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	291.102	290.916	289.931	288.287	285.786	282.566	280.613	
	VZ-BAR	291.102	290.916	289.931	288.287	285.786	282.566	280.613	
	V-THET-BAR	0.000	0.001	0.000	0.001	0.000	0.000	0.000	
	MACH-BAR	0.262	0.262	0.261	0.260	0.258	0.255	0.253	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.556	14.524	14.468	14.572	14.575	14.562	14.550	14.543
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.309	13.327	13.367	13.408	13.449	13.488	13.504	
	BETABAR	26.469	29.491	31.139	31.154	30.865	29.501	25.759	
	EPSILON	-0.000	-1.143	-2.744	-4.220	-5.822	-7.300	-8.118	
	K-BAR	0.990	0.990	0.990	0.990	0.989	0.989	0.990	
	V-BAR	397.080	388.875	373.348	382.748	376.147	367.343	362.453	
	VZ-BAR	355.456	338.486	319.556	327.550	322.876	319.703	326.437	
	V-THET-BAR	176.983	191.415	193.061	198.008	192.972	180.897	157.516	
	MACH-BAR	0.360	0.353	0.338	0.347	0.341	0.333	0.328	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-6.6	-4.3	-4.0	-5.4	-7.0	-9.7	-14.2	
	OMEGABAR	0.149	0.248	0.332	0.182	0.180	0.205	0.226	
	TURNING	-26.5	-29.5	-31.1	-31.2	-30.9	-29.5	-25.8	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.558	14.524	14.468	14.573	14.575	14.562	14.550	14.543
WLOK= 2.743	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34246.0	P-STATIC	12.787	12.806	12.836	12.866	12.899	12.930	12.937	
	BETABAR	21.802	24.216	25.431	25.885	25.683	24.517	21.400	
	EPSILON	-1.176	-1.464	-3.260	-5.292	-7.149	-7.930	-6.637	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	476.157	469.181	457.743	466.785	462.287	456.140	453.622	
	VZ-BAR	442.100	427.890	413.391	419.955	416.617	415.006	422.347	
	V-THET-BAR	176.843	192.433	196.562	203.779	200.349	189.279	165.516	
	MACH-BAR	0.434	0.428	0.417	0.425	0.421	0.415	0.413	
	U-WHEEL	750.465	772.803	817.484	862.165	906.846	951.527	973.868	
	V-BAR-PR	724.220	721.063	745.953	780.923	820.195	867.906	912.035	
	BETABAR-PR	52.378	53.600	56.344	57.467	59.471	61.433	62.414	
	V-THET-B-P	-573.622	-580.370	-620.921	-658.386	-706.497	-762.248	-808.351	
	MACH-BAR-P	0.661	0.657	0.679	0.712	0.747	0.790	0.830	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.337	20.154	20.749	20.833	20.731	20.201	19.954	20.557
ROTOR	T-TOTAL	577.52	576.67	577.32	575.66	578.90	583.60	587.27	578.20
	P-STATIC	14.466	14.650	15.038	15.386	15.690	15.977	16.123	
PR = 1.4136	BETABAR	61.874	56.767	54.632	53.828	56.744	63.431	67.713	
TR = 1.1147	EPSILON	-2.885	-1.743	-2.604	-4.427	-6.232	-6.868	-6.418	
EFF-A = 0.9090	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.9107	V-BAR	742.994	776.771	780.644	757.374	729.488	674.099	645.646	
	VZ-BAR	350.259	425.727	451.857	447.010	400.050	301.613	244.862	
	V-THET-BAR	655.255	649.639	636.575	611.388	609.970	602.707	597.412	
	MACH-BAR	0.657	0.691	0.694	0.672	0.644	0.589	0.560	
	U-WHEEL	741.648	763.404	806.919	850.435	893.950	937.466	959.223	
	V-BAR-PR	360.756	440.677	482.932	506.944	490.658	450.938	436.881	
	BETABAR-PR	13.856	14.949	20.653	28.136	35.378	48.004	55.911	
	V-THET-B-P	-86.394	-113.765	-170.344	-239.047	-283.980	-334.758	-361.811	
	MACH-BAR-P	0.319	0.392	0.469	0.450	0.433	0.394	0.379	
	D-FACTOR	0.731	0.615	0.575	0.560	0.612	0.694	0.731	
	TURNING	38.5	38.7	35.7	29.3	24.1	13.4	6.5	
	INCID-M	-5.0	-2.5	1.1	1.9	2.6	2.8	2.6	
	DEVIATION	25.7	18.7	12.1	10.5	10.2	16.8	22.1	
	OMEGABAR-P	0.343	0.167	0.053	0.026	0.096	0.230	0.303	
	LOSS PAR	0.117	0.058	0.019	0.009	0.033	0.068	0.076	
	PT-RATIO	1.328	1.387	1.434	1.429	1.423	1.388	1.371	1.4136
	EFF-AD	0.746	0.878	0.960	0.977	0.914	0.785	0.715	0.9090
	EFF-POLY	0.755	0.883	0.961	0.978	0.917	0.794	0.727	0.9107
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.337	20.132	20.740	20.831	20.746	20.215	19.954	20.557
	T-TOTAL	577.52	576.67	577.33	575.58	578.72	583.44	587.27	578.20
	P-STATIC	14.509	14.654	14.965	15.286	15.570	15.841	15.986	
	BETABAR	62.554	57.076	54.316	53.287	55.812	62.047	66.113	
	EPSILON	-0.113	-0.598	-2.140	-3.700	-4.924	-6.627	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	739.405	775.110	785.787	764.976	739.807	686.679	658.093	
	VZ-BAR	340.802	421.323	458.354	457.307	415.722	321.961	266.487	
	V-THET-BAR	656.180	650.492	638.254	613.236	611.907	606.390	601.724	
	MACH-BAR	0.654	0.689	0.699	0.680	0.654	0.600	0.572	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.221	19.254	20.296	20.153	19.952	19.582	19.222	19.870
ROTOR PLUS STATOR	T-TOTAL	577.52	576.71	577.37	575.74	577.90	582.47	587.27	578.20
	P-STATIC	17.515	17.517	17.516	17.495	17.462	17.421	17.400	
PR = 1.3664	BETABAR	13.886	12.438	10.718	10.058	8.844	7.963	6.957	
TR = 1.1147	EPSILON	0.450	0.280	-0.609	-1.535	-2.309	-3.819	-5.489	
EFF-A = 0.8132	K-BAR	0.860	0.860	0.860	0.860	0.860	0.860	0.860	
EFF-P = 0.8212	V-BAR	279.164	428.616	534.686	523.360	509.407	479.493	444.843	
	VZ-BAR	271.005	418.580	525.358	515.314	503.369	474.869	441.568	
IGV,ROTOR,STATOR	V-THET-BAR	66.998	92.182	99.438	91.409	78.320	66.430	53.882	
	MACH-BAR	0.238	0.369	0.464	0.454	0.441	0.412	0.380	
PR = 1.3522	EFF-POLY	0.759	0.798	0.877	0.797	0.770	0.784	0.693	
TR = 1.1147	INCID-M	6.9	4.4	3.5	2.8	4.3	8.4	11.3	
EFF-A = 0.7875	DEVIATION	13.1	11.1	9.8	9.7	9.5	9.9	9.9	
EFF-P = 0.7939	OMEGA-BAR	0.231	0.160	0.077	0.122	0.153	0.145	0.184	
	LOSS PAR	0.080	0.057	0.029	0.048	0.063	0.062	0.081	
	D-FACTOR	0.905	0.707	0.582	0.592	0.614	0.650	0.697	
	TURNING	48.7	44.6	43.6	43.2	47.0	54.1	59.2	

Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 87)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.635	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34245.0	P-STATIC	14.049	14.050	14.054	14.061	14.072	14.085	14.094	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.187	-2.839	-4.298	-5.882	-7.287	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	281.930	281.748	280.783	279.212	276.809	273.701	271.802	
	VZ-BAR	281.930	281.748	280.783	279.212	276.809	273.701	271.802	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.001	0.000	0.000	
	MACH-BAR	0.254	0.254	0.253	0.252	0.249	0.247	0.245	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.567	14.535	14.484	14.580	14.582	14.569	14.558	14.552
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.403	13.420	13.457	13.495	13.534	13.570	13.585	
	BETABAR	26.228	29.258	31.129	31.046	30.633	29.117	24.820	
	EPSILON	-0.000	-1.150	-2.744	-4.207	-5.806	-7.281	-8.118	
	K-BAR	0.990	0.990	0.990	0.990	0.989	0.989	0.990	
	V-BAR	382.749	374.801	359.998	369.053	362.533	353.935	349.214	
	VZ-BAR	343.342	326.982	308.162	316.188	311.943	309.195	316.958	
	V-THET-BAR	169.152	183.166	186.105	190.328	184.722	172.221	146.588	
	MACH-BAR	0.347	0.339	0.326	0.334	0.328	0.320	0.316	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-6.9	-4.5	-4.0	-5.5	-7.2	-10.1	-15.1	
	OMEGABAR	0.198	0.247	0.329	0.180	0.180	0.206	0.227	
	TURNING	-26.2	-29.3	-31.1	-31.0	-30.6	-29.1	-24.8	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.567	14.535	14.484	14.581	14.582	14.569	14.558	14.552
WCOR= 2.661	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=34245.0	P-STATIC	12.920	12.938	12.963	12.991	13.023	13.053	13.058	
	BETABAR	21.644	24.072	25.450	25.817	25.524	24.239	20.661	
	EPSILON	-1.170	-1.133	-3.221	-5.634	-7.739	-8.020	-6.637	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	458.251	451.448	440.946	449.767	445.106	438.838	436.564	
	VZ-BAR	425.943	412.183	398.158	404.875	401.665	400.140	408.488	
	V-THET-BAR	169.018	184.122	189.481	195.876	191.794	180.160	154.034	
	MACH-BAR	0.417	0.411	0.401	0.409	0.405	0.399	0.397	
	U-WHEEL	750.399	772.735	817.412	862.090	906.767	951.444	973.782	
	V-BAR-PR	720.716	718.591	743.529	779.596	820.081	868.906	915.888	
	BETABAR-PR	53.772	54.998	57.621	58.711	60.672	62.578	63.513	
	V-THET-B-P	-581.382	-588.614	-627.931	-666.214	-714.973	-771.283	-819.749	
	MACH-BAR-P	0.657	0.654	0.676	0.710	0.746	0.790	0.833	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.926	20.009	20.979	20.907	20.684	20.161	19.822	20.604
ROTOR	T-TOTAL	578.87	577.79	578.81	577.05	580.34	586.04	589.71	579.58
	P-STATIC	14.549	14.739	15.149	15.500	15.795	16.078	16.229	
PR = 1.4159	BETABAR	68.104	58.393	54.591	54.476	58.271	66.023	73.381	
TR = 1.1174	EPSILON	-2.885	-1.379	-2.453	-4.601	-6.540	-7.158	-6.418	
EFF-A = 0.8930	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.8953	V-BAR	709.493	761.786	785.875	753.706	719.009	663.884	627.297	
	VZ-BAR	264.583	399.320	455.340	437.941	378.146	269.889	179.410	
	V-THET-BAR	658.312	648.523	640.518	613.415	611.504	606.380	601.094	
	MACH-BAR	0.625	0.675	0.698	0.668	0.633	0.578	0.542	
	U-WHEEL	741.585	763.336	806.849	850.360	893.871	937.384	959.139	
	V-BAR-PR	277.377	415.500	484.792	497.983	471.990	427.440	400.480	
	BETABAR-PR	17.470	16.034	20.064	28.415	36.757	50.834	63.385	
	V-THET-B-P	-83.271	-114.814	-166.331	-236.945	-282.367	-331.003	-358.045	
	MACH-BAR-P	0.244	0.368	0.431	0.441	0.415	0.372	0.346	
	D-FACTOR	0.851	0.693	0.577	0.577	0.641	0.730	0.779	
	TURNING	36.3	39.0	37.6	30.3	23.9	11.7	0.1	
	INCID-M	-3.6	-1.1	2.4	3.2	3.8	3.9	3.7	
	DEVIATION	29.3	19.3	11.5	10.7	11.6	19.6	29.5	
	OMEGABAR-P	0.454	0.226	0.050	0.044	0.129	0.271	0.353	
	LOSS PAR	0.152	0.078	0.018	0.016	0.044	0.075	0.071	
	PT-RATIO	1.299	1.376	1.448	1.433	1.419	1.384	1.362	1.4159
	EFF-AU	0.670	0.838	0.963	0.963	0.885	0.750	0.674	0.8930
	EFF-POLY	0.682	0.845	0.965	0.964	0.890	0.761	0.687	0.8953
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.926	19.977	20.964	20.914	20.704	20.179	19.822	20.604
	T-TOTAL	578.87	577.80	578.81	577.01	580.09	585.84	589.71	579.58
	P-STATIC	14.565	14.731	15.080	15.420	15.703	15.971	16.111	
	BETABAR	68.598	58.672	54.331	54.057	57.423	64.802	71.546	
	EPSILON	-0.113	-0.928	-2.377	-3.699	-4.831	-6.579	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	708.072	760.513	790.334	760.317	727.567	674.425	638.245	
	VZ-BAR	258.387	395.511	460.844	446.300	391.751	287.242	202.010	
	V-THET-BAR	659.242	649.331	642.064	615.545	613.070	610.009	605.432	
	MACH-BAR	0.623	0.674	0.702	0.674	0.641	0.588	0.552	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	18.221	19.443	20.364	20.166	19.952	19.691	19.153	19.936
ROTOR PLUS STATOR	T-TOTAL	578.87	577.81	578.82	577.17	578.87	584.32	589.71	579.58
	P-STATIC	17.681	17.682	17.676	17.655	17.626	17.591	17.574	
PR = 1.3700	BETABAR	13.758	12.291	11.159	9.895	8.328	7.752	7.236	
TR = 1.1174	EPSILON	0.450	-0.092	-0.817	-1.310	-1.822	-3.316	-5.489	
EFF-A = 0.8019	K-BAR	0.850	0.850	0.850	0.850	0.850	0.850	0.850	
EFF-P = 0.8105	V-BAR	244.075	429.942	525.002	508.408	491.900	471.749	414.704	
	VZ-BAR	237.072	420.103	515.075	500.842	486.712	467.439	411.401	
	V-THET-BAR	58.045	91.446	101.607	87.372	71.249	63.630	52.235	
IGV,ROTOR,STATOR	MACH-BAR	0.208	0.370	0.454	0.440	0.425	0.405	0.353	
	EFF-POLY	0.835	0.869	0.844	0.782	0.794	0.861	0.715	
PR = 1.3567	INCID-M	12.9	6.0	3.5	3.5	5.9	11.2	16.8	
TR = 1.1174	DEVIATION	13.0	11.0	10.3	9.5	9.0	9.7	10.2	
EFF-A = 0.7787	OMEGA-BAR	0.162	0.102	0.102	0.136	0.150	0.116	0.180	
EFF-P = 0.7854	LOSS PAR	0.056	0.036	0.038	0.053	0.061	0.050	0.079	
	D-FACTOR	0.956	0.700	0.597	0.614	0.636	0.661	0.738	
	TURNING	54.8	46.4	43.2	44.2	49.1	57.1	64.3	

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Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 88)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.697	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29081.0	P-STATIC	13.974	13.975	13.979	13.987	13.998	14.013	14.022	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.078	-2.703	-4.138	-5.708	-7.222	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	298.047	297.892	296.985	295.430	293.025	289.803	287.770	
	VZ-BAR	298.047	297.892	296.985	295.430	293.025	289.803	287.770	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.269	0.269	0.268	0.266	0.264	0.261	0.259	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.560	14.527	14.471	14.574	14.577	14.563	14.552	14.545
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.253	13.271	13.307	13.351	13.393	13.432	13.450	
	BETABAR	28.208	29.135	30.587	30.454	29.529	26.831	21.193	
	EPSILON	-0.000	-1.050	-2.628	-4.067	-5.643	-7.198	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	406.487	398.688	384.146	392.514	385.898	377.297	372.346	
	VZ-BAR	358.212	348.246	330.695	338.361	335.772	336.689	347.164	
	V-THET-BAR	192.135	194.100	195.469	198.946	190.195	170.293	134.606	
	MACH-BAR	0.369	0.362	0.348	0.356	0.350	0.342	0.337	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.9	-4.6	-4.6	-6.1	-8.4	-12.4	-18.7	
	OMEGABAR	0.187	0.233	0.312	0.170	0.169	0.193	0.212	
	TURNING	-28.2	-29.1	-30.6	-30.5	-29.5	-26.8	-21.2	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.560	14.527	14.472	14.575	14.576	14.563	14.552	14.545
WCOR= 2.725	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29081.0	P-STATIC	12.675	12.696	12.731	12.765	12.801	12.829	12.835	
	BETABAR	22.974	23.741	24.877	25.179	24.484	22.214	17.570	
	EPSILON	-1.170	-1.695	-3.464	-5.321	-6.785	-7.047	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	491.859	484.959	473.379	481.321	476.441	470.790	468.568	
	VZ-BAR	452.845	443.920	429.456	435.590	433.596	435.825	446.710	
	V-THET-BAR	191.982	195.238	199.134	204.773	197.459	177.987	141.443	
	MACH-BAR	0.449	0.443	0.432	0.439	0.435	0.429	0.427	
	U-WHEEL	637.242	656.210	694.150	732.090	770.030	807.970	826.940	
	V-BAR-PR	635.078	639.981	655.349	683.966	718.231	766.052	818.203	
	BETABAR-PR	44.516	46.079	49.055	50.440	52.863	55.322	56.909	
	V-THET-B-P	-445.260	-460.971	-495.016	-527.317	-572.571	-629.983	-685.497	
	MACH-BAR-P	0.580	0.584	0.598	0.624	0.655	0.698	0.746	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.310	17.781	18.278	18.186	17.742	17.300	17.045	17.867
ROTOR	T-TOTAL	553.19	553.06	554.78	553.11	554.31	554.52	555.01	553.97
-----	P-STATIC	13.356	13.454	13.697	13.910	14.081	14.241	14.317	
PR = 1.2284	BETABAR	49.398	46.324	45.687	45.066	47.747	48.070	46.256	
TR = 1.0680	EPSILON	-2.885	-2.299	-3.256	-5.043	-6.430	-6.700	-6.418	
EFF-A = 0.8911	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.8935	V-BAR	688.936	713.211	726.257	699.906	652.282	600.128	569.267	
	VZ-BAR	448.360	492.536	507.344	494.343	438.594	400.991	393.613	
	V-THET-BAR	523.074	515.800	519.665	495.469	482.781	446.488	411.258	
	MACH-BAR	0.620	0.644	0.655	0.631	0.584	0.534	0.505	
	U-WHEEL	629.756	648.229	685.179	722.130	759.080	796.030	814.505	
	V-BAR-PR	460.877	510.036	533.670	543.859	518.471	532.026	563.506	
	BETABAR-PR	13.384	15.045	18.068	24.634	32.218	41.069	45.693	
	V-THET-B-P	-106.682	-132.428	-165.515	-226.660	-276.339	-349.542	-403.247	
	MACH-BAR-P	0.415	0.460	0.482	0.490	0.468	0.474	0.500	
	D-FACTOR	0.455	0.381	0.370	0.377	0.447	0.465	0.457	
	TURNING	31.1	31.0	31.0	25.8	20.6	14.3	11.2	
	INCID-M	-12.9	-10.1	-6.2	-5.1	-4.0	-3.3	-2.9	
	DEVIATION	25.2	18.8	9.5	7.0	7.0	9.8	11.8	
	OMEGABAR-P	0.248	0.106	0.009	0.017	0.135	0.207	0.242	
	LOSS PAR	0.084	0.037	0.003	0.006	0.048	0.069	0.076	
	PT-RATIO	1.189	1.224	1.263	1.247	1.217	1.188	1.171	1.2284
	EFF-AD	0.763	0.898	0.991	0.982	0.883	0.732	0.661	0.8911
	EFF-POLY	0.768	0.900	0.991	0.982	0.846	0.737	0.668	0.8935
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.310	17.769	18.272	18.197	17.752	17.305	17.045	17.867
	T-TOTAL	553.19	553.05	554.76	553.09	554.30	554.52	555.01	553.97
	P-STATIC	13.370	13.429	13.596	13.780	13.947	14.105	14.182	
	BETABAR	49.630	46.290	45.138	44.291	46.790	47.039	45.156	
	EPSILON	-0.113	-1.001	-2.782	-4.111	-5.580	-6.931	-7.979	
	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
	V-BAR	687.531	714.708	734.689	712.338	665.942	614.753	584.217	
	VZ-BAR	445.330	493.882	518.251	509.896	455.966	418.934	411.978	
	V-THET-BAR	523.812	516.571	520.753	497.424	485.348	449.898	414.227	
	MACH-BAR	0.619	0.645	0.664	0.643	0.597	0.548	0.519	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.810	17.348	17.958	17.937	17.437	16.943	16.678	17.532
ROTOR PLUS STATOR	T-TOTAL	553.19	553.03	554.72	553.17	554.27	554.51	555.01	553.97
----------	P-STATIC	15.392	15.399	15.402	15.382	15.345	15.303	15.278	
PR = 1.2054	BETABAR	15.307	15.093	15.046	14.975	14.771	11.653	6.681	
TR = 1.0680	EPSILON	0.450	-0.021	-0.983	-2.075	-3.218	-4.752	-5.489	
EFF-A = 0.8062	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8112	V-BAR	406.585	471.220	534.778	534.293	488.619	437.027	406.153	
	VZ-BAR	392.173	454.968	516.444	516.147	472.472	427.992	403.395	
	V-THET-BAR	107.296	122.690	138.827	138.063	124.574	88.307	47.253	
IGV,ROTOR,STATOR	MACH-BAR	0.357	0.416	0.473	0.474	0.431	0.384	0.356	
----------	EFF-POLY	0.826	0.850	0.878	0.879	0.842	0.793	0.772	
PR = 1.1931	INCID-M	-6.0	-6.4	-5.7	-6.2	-8.7	-6.6	-9.6	
TR = 1.0680	DEVIATION	14.5	13.8	14.2	14.6	15.4	13.6	9.6	
EFF-A = 0.7614	OMEGA-BAR	0.127	0.097	0.067	0.059	0.083	0.113	0.128	
EFF-P = 0.7668	LOSS PAR	0.043	0.034	0.025	0.023	0.033	0.048	0.056	
	D-FACTOR	0.623	0.540	0.471	0.455	0.497	0.549	0.586	
	TURNING	34.3	31.2	30.1	29.3	32.0	35.4	38.5	

Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 89)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.636	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29098.0	P-STATIC	14.021	14.022	14.026	14.033	14.044	14.058	14.067	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.078	-2.734	-4.191	-5.757	-7.253	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	287.955	287.793	286.905	285.367	283.015	279.890	277.939	
	VZ-BAR	287.955	287.793	286.905	285.367	283.015	279.890	277.939	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.260	0.259	0.259	0.257	0.255	0.252	0.250	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.567	14.535	14.484	14.580	14.582	14.569	14.558	14.552
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.306	13.324	13.358	13.399	13.439	13.475	13.492	
	BETABAR	28.221	28.651	30.069	30.064	29.223	26.882	22.342	
	EPSILON	-0.000	-1.050	-2.663	-4.128	-5.711	-7.233	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	398.807	391.158	377.353	385.454	379.092	370.766	365.919	
	VZ-BAR	351.400	343.266	326.568	333.597	330.843	330.683	338.450	
	V-THET-BAR	188.587	187.545	189.071	193.100	185.078	167.640	139.099	
	MACH-BAR	0.362	0.355	0.342	0.349	0.343	0.336	0.331	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.9	-5.1	-5.1	-6.4	-8.7	-12.4	-17.6	
	OMEGABAR	0.190	0.237	0.316	0.173	0.172	0.197	0.217	
	TURNING	-28.2	-28.7	-30.1	-30.1	-29.2	-26.9	-22.3	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.567	14.535	14.484	14.581	14.582	14.569	14.558	14.552
WCOR= 2.662	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29098.0	P-STATIC	12.748	12.768	12.800	12.832	12.866	12.893	12.899	
	BETABAR	22.977	23.347	24.474	24.867	24.246	22.283	18.523	
	EPSILON	-1.170	-1.695	-3.446	-5.360	-6.828	-6.985	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	482.722	476.001	465.013	472.642	467.885	462.384	460.081	
	VZ-BAR	444.423	437.027	423.232	428.821	426.615	427.841	436.246	
	V-THET-BAR	188.437	188.637	192.644	198.753	192.137	175.323	146.164	
	MACH-BAR	0.441	0.434	0.424	0.431	0.427	0.421	0.419	
	U-WHEEL	637.615	656.594	694.556	732.518	770.481	808.443	827.424	
	V-BAR-PR	631.880	640.307	656.544	684.690	718.674	764.133	808.965	
	BETABAR-PR	45.305	46.956	49.860	51.221	53.584	55.948	57.366	
	V-THET-B-P	-449.177	-467.957	-501.912	-533.765	-578.343	-633.119	-681.259	
	MACH-BAR-P	0.577	0.584	0.598	0.624	0.655	0.696	0.737	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.559	17.936	18.443	18.440	17.934	17.680	17.456	18.097
ROTOR	T-TOTAL	555.01	554.85	556.73	555.56	556.50	557.22	558.43	556.19
-----	P-STATIC	13.605	13.713	13.966	14.196	14.381	14.556	14.638	
PR = 1.2436	BETABAR	51.616	48.525	47.863	47.321	50.645	50.651	50.250	
TR = 1.0723	EPSILON	-2.885	-2.299	-3.232	-5.004	-6.376	-6.689	-6.418	
EFF-A = 0.8903	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8924	V-BAR	684.626	701.473	714.663	693.270	639.300	601.373	573.698	
	VZ-BAR	425.108	464.586	479.475	469.970	405.414	381.291	366.848	
	V-THET-BAR	536.652	525.544	529.950	509.652	494.302	465.043	447.080	
	MACH-BAR	0.615	0.631	0.643	0.623	0.570	0.534	0.508	
	U-WHEEL	630.124	648.607	685.580	722.552	759.523	796.495	814.981	
	V-BAR-ER	435.263	480.621	504.108	515.989	484.543	505.269	523.813	
	BETABAR-PR	12.401	14.830	17.982	24.374	33.195	40.994	45.546	
	V-THET-B-P	-93.472	-123.064	-155.630	-212.900	-265.221	-331.452	-373.901	
	MACH-BAR-P	0.391	0.432	0.453	0.463	0.432	0.449	0.464	
	D-FACTOR	0.502	0.436	0.425	0.430	0.504	0.509	0.514	
	TURNING	32.9	32.1	31.9	26.8	20.4	15.0	11.8	
	INCID-M	-12.1	-9.2	-5.4	-4.3	-3.3	-2.7	-2.4	
	DEVIATION	24.3	18.6	9.4	6.7	8.0	9.8	11.7	
	OMEGABAR-P	0.240	0.121	0.028	0.025	0.147	0.194	0.241	
	LOSS PAR	0.082	0.042	0.010	0.009	0.052	0.068	0.076	
	PT-RATIO	1.205	1.234	1.273	1.264	1.230	1.214	1.199	1.2436
	EFF-AD	0.784	0.889	0.975	0.975	0.837	0.767	0.696	0.8903
	EFF-POLY	0.789	0.891	0.975	0.975	0.841	0.772	0.703	0.8924
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.559	17.926	18.434	18.455	17.943	17.688	17.456	18.097
	T-TOTAL	555.01	554.84	556.70	555.55	556.48	557.20	558.43	556.19
	P-STATIC	13.637	13.707	13.882	14.076	14.255	14.421	14.504	
	BETABAR	52.046	48.642	47.390	46.540	49.646	49.543	49.063	
	EPSILON	-0.113	-0.928	-2.704	-4.011	-5.492	-6.865	-7.979	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	681.559	701.388	721.455	704.975	652.168	615.587	588.097	
	VZ-BAR	419.181	463.463	488.432	488.916	422.295	399.436	385.341	
	V-THET-BAR	537.410	526.404	530.971	511.708	496.974	468.399	448.264	
	MACH-BAR	0.612	0.631	0.649	0.634	0.583	0.548	0.521	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	16.957	17.493	18.142	18.151	17.617	17.230	16.957	17.737
ROTOR PLUS STATOR	T-TOTAL	555.01	554.81	556.62	555.62	556.44	557.17	558.43	556.19
----------	P-STATIC	15.708	15.716	15.722	15.705	15.671	15.634	15.611	
PR = 1.2188	BETABAR	15.858	15.616	15.560	15.583	15.399	12.972	9.910	
TR = 1.0723	EPSILON	0.450	0.029	-0.918	-1.999	-3.161	-4.746	-5.489	
EFF-A = 0.8048	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8102	V-BAR	379.661	447.866	517.702	520.030	468.844	428.217	395.791	
	VZ-BAR	365.213	431.338	498.729	500.915	452.012	417.279	389.886	
	V-THET-BAR	103.742	120.548	138.869	139.699	124.497	96.141	68.112	
IGV,ROTOR,STATOR	MACH-BAR	0.332	0.394	0.457	0.459	0.412	0.375	0.346	
----------	FFF-POLY	0.801	0.848	0.888	0.863	0.838	0.756	0.716	
PR = 1.2071	INCID-M	-3.6	-4.0	-3.4	-4.0	-1.9	-4.1	-5.7	
TR = 1.0723	DEVIATION	15.1	14.3	14.7	15.2	15.0	15.0	12.8	
EFF-A = 0.7652	OMEGA-BAR	0.154	0.103	0.064	0.069	0.088	0.139	0.169	
EFF-P = 0.7704	LOSS PAR	0.052	0.036	0.023	0.027	0.035	0.059	0.074	
	D-FACTOR	0.668	0.571	0.489	0.477	0.523	0.571	0.614	
	TURNING	36.2	33.0	31.8	31.0	34.2	36.6	39.2	

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Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 90)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.578	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=28932.0	P-STATIC	14.040	14.040	14.044	14.051	14.061	14.075	14.083	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.078	-2.703	-4.129	-5.696	-7.222	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	283.939	283.783	282.922	281.453	279.182	276.107	274.174	
	VZ-BAR	283.939	283.783	282.922	281.453	279.182	276.107	274.174	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.256	0.256	0.255	0.254	0.252	0.249	0.247	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.573	14.542	14.494	14.586	14.587	14.574	14.564	14.559
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.373	13.389	13.422	13.463	13.501	13.535	13.551	
	BETABAR	28.080	28.843	30.435	30.160	29.019	26.219	21.999	
	EPSILON	-0.000	-1.050	-2.628	-4.058	-5.641	-7.218	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	388.722	381.218	367.740	375.576	369.747	360.984	356.435	
	VZ-BAR	342.966	333.927	317.068	324.732	322.803	323.823	330.484	
	V-THET-BAR	182.972	183.898	186.280	188.697	179.073	159.485	133.515	
	MACH-BAR	0.352	0.345	0.333	0.340	0.334	0.327	0.322	
	INCID-H	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-5.0	-4.9	-4.7	-6.3	-8.9	-13.0	-17.9	
	OMEGABAR	0.186	0.233	0.309	0.168	0.169	0.194	0.213	
	TURNING	-28.1	-28.8	-30.4	-30.2	-29.0	-26.2	-22.0	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.573	14.542	14.494	14.587	14.587	14.574	14.564	14.559
WCOR= 2.602	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=28932.0	P-STATIC	12.845	12.865	12.896	12.927	12.959	12.984	12.990	
	BETABAR	22.906	23.584	24.806	24.981	24.103	21.755	18.265	
	EPSILON	-1.170	-1.672	-3.440	-5.390	-6.862	-7.020	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	469.723	463.080	452.385	459.846	455.108	449.815	447.649	
	VZ-BAR	432.683	424.531	410.608	416.828	415.427	417.765	425.096	
	V-THET-BAR	182.826	184.975	189.779	194.199	185.859	166.715	140.296	
	MACH-BAR	0.428	0.422	0.412	0.419	0.414	0.409	0.407	
	U-WHEEL	633.977	652.848	690.594	728.339	766.085	803.831	822.703	
	V-BAR-PR	625.102	631.780	647.629	677.538	713.619	761.875	803.982	
	BETABAR-PR	46.197	47.780	50.651	52.031	54.397	56.745	58.080	
	V-THET-B-P	-451.151	-467.873	-500.814	-534.140	-580.225	-637.115	-682.407	
	MACH-BAR-P	0.570	0.576	0.590	0.617	0.650	0.694	0.732	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.677	18.064	18.533	18.537	18.060	17.846	17.662	18.217
ROTOR	T-TOTAL	556.57	556.15	557.66	556.30	557.71	559.01	560.35	557.37
-----	P-STATIC	13.803	13.920	14.172	14.408	14.597	14.775	14.860	
PR = 1.2513	BETABAR	54.201	50.707	49.804	48.760	52.439	52.592	52.390	
TR = 1.0746	EPSILON	-2.885	-2.275	-3.225	-5.092	-6.410	-6.693	-6.418	
EFF-A = 0.8893	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8908	V-BAR	675.521	692.388	703.090	681.679	628.829	593.878	569.392	
	VZ-BAR	395.137	438.486	453.774	449.378	383.352	360.771	347.493	
	V-THET-BAR	547.900	535.813	537.052	512.580	498.453	471.736	451.061	
	MACH-BAR	0.605	0.622	0.631	0.611	0.560	0.526	0.503	
	U-WHEEL	626.529	644.907	681.668	718.429	755.191	791.951	810.332	
	V-BAR-PR	402.884	451.868	476.272	494.325	461.465	482.430	499.827	
	BETABAR-PR	11.254	13.963	17.676	24.615	33.813	41.586	45.955	
	V-THET-B-P	-78.628	-109.094	-144.616	-205.850	-256.737	-320.215	-359.271	
	MACH-BAR-P	0.361	0.406	0.427	0.443	0.411	0.428	0.441	
	D-FACTOR	0.558	0.482	0.466	0.460	0.540	0.545	0.549	
	TURNING	34.9	33.8	33.0	27.4	20.6	15.2	12.1	
	INCID-H	-11.2	-8.4	-6.6	-3.5	-2.5	-1.9	-1.7	
	DEVIATION	23.1	17.7	9.1	6.9	8.6	10.4	12.1	
	OMEGABAR-P	0.261	0.132	0.037	0.024	0.153	0.203	0.246	
	LOSS PAR	0.090	0.046	0.013	0.009	0.053	0.067	0.077	
	PT-RATIO	1.213	1.242	1.278	1.270	1.238	1.225	1.213	1.2513
	EFF-AD	0.778	0.886	0.968	0.976	0.838	0.768	0.706	0.8893
	EFF-POLY	0.783	0.889	0.969	0.976	0.842	0.774	0.713	0.8908
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.677	18.055	18.524	18.550	18.069	17.849	17.662	18.217
	T-TOTAL	556.57	556.15	557.64	556.28	557.68	558.99	560.35	557.37
	P-STATIC	13.820	13.902	14.092	14.307	14.480	14.656	14.742	
	BETABAR	54.516	50.725	49.321	48.063	51.442	51.577	51.309	
	EPSILON	-0.113	-0.927	-2.320	-3.985	-5.181	-6.865	-7.979	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	673.816	693.400	709.575	691.857	640.833	606.405	582.067	
	VZ-BAR	391.131	438.964	462.511	462.383	399.448	376.854	363.866	
	V-THET-BAR	548.674	536.711	538.126	514.651	501.097	475.085	454.316	
	MACH-BAR	0.603	0.623	0.637	0.621	0.571	0.538	0.515	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.074	17.584	18.235	18.263	17.743	17.363	17.133	17.850
ROTOR PLUS STATOR	T-TOTAL	556.57	556.14	557.58	556.35	557.59	558.95	560.35	557.37
----------	P-STATIC	15.925	15.933	15.940	15.927	15.895	15.859	15.837	
PR = 1.2261	BETABAR	15.645	15.808	15.967	15.872	15.292	12.630	9.136	
TR = 1.0746	EPSILON	0.450	0.061	-0.938	-1.981	-3.130	-4.700	-5.489	
EFF-A = 0.8043	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8099	V-BAR	362.950	430.428	502.456	506.368	455.247	414.327	386.733	
	VZ-BAR	349.503	414.346	483.072	487.064	439.730	403.970	381.827	
	V-THET-BAR	97.879	117.269	138.215	138.483	120.062	92.021	61.405	
IGV,ROTOR,STATOR	MACH-BAR	0.317	0.378	0.442	0.447	0.399	0.362	0.337	
----------	EFF-POLY	0.802	0.836	0.887	0.868	0.839	0.741	0.701	
PR = 1.2748	INCID-H	-1.1	-1.9	-1.5	-2.4	-0.1	-2.1	-3.5	
TR = 1.0746	DEVIATION	14.9	14.5	15.1	15.5	15.9	14.8	12.1	
EFF-A = 0.7685	OMEGA-BAR	0.156	0.113	0.065	0.068	0.091	0.152	0.181	
EFF-P = 0.7730	LOSS PAR	0.053	0.040	0.024	0.026	0.036	0.064	0.079	
	D-FACTOR	0.698	0.598	0.507	0.489	0.542	0.595	0.638	
	TURNING	38.9	34.9	33.4	32.2	36.2	38.7	42.2	

Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 91)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.501	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29061.0	P-STATIC	14.080	14.081	14.085	14.091	14.101	14.114	14.122	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.078	-2.687	-4.132	-5.723	-7.263	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	274.875	274.738	273.888	272.451	270.210	267.198	265.317	
	VZ-BAR	274.875	274.738	273.888	272.451	270.210	267.198	265.317	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.248	0.248	0.247	0.245	0.243	0.241	0.239	
IGV TRAILING EDGE	DIAMETER	5.018	5.207	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.580	14.551	14.507	14.593	14.593	14.581	14.571	14.567
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.484	13.501	13.534	13.569	13.604	13.635	13.648	
	BETABAR	28.007	28.902	29.929	29.943	28.823	26.176	22.331	
	EPSILON	-0.000	-1.044	-2.605	-4.061	-5.656	-7.227	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	370.900	363.198	349.706	358.017	351.759	343.918	339.749	
	VZ-BAR	327.464	317.964	303.071	310.232	308.178	308.632	314.270	
	V-THET-BAR	174.167	175.530	174.477	178.697	169.586	151.713	129.087	
	MACH-BAR	0.336	0.329	0.316	0.324	0.318	0.311	0.307	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-5.1	-4.9	-5.2	-6.6	-9.1	-13.1	-17.6	
	OMEGABAR	0.186	0.233	0.308	0.168	0.170	0.196	0.216	
	TURNING	-28.0	-28.9	-29.9	-29.9	-28.8	-26.2	-22.3	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.580	14.551	14.507	14.594	14.593	14.581	14.571	14.567
WCOR= 2.522	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29061.0	P-STATIC	13.012	13.030	13.057	13.084	13.115	13.138	13.143	
	BETABAR	22.946	23.668	24.428	24.859	23.995	21.784	18.591	
	EPSILON	-1.170	-1.577	-3.451	-5.582	-7.218	-7.332	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	446.394	439.817	429.831	437.524	432.822	427.549	425.465	
	VZ-BAR	411.073	402.822	391.352	396.985	395.418	397.007	403.264	
	V-THET-BAR	174.029	176.557	177.756	183.930	176.009	158.664	135.644	
	MACH-BAR	0.406	0.400	0.391	0.398	0.394	0.389	0.387	
	U-WHEEL	636.804	655.759	693.673	731.586	769.500	807.414	826.372	
	V-BAR-PR	618.985	626.031	647.560	676.411	713.161	760.592	799.829	
	BETABAR-PR	48.386	49.948	52.816	54.061	56.324	58.533	59.723	
	V-THET-B-P	-462.775	-479.202	-515.916	-547.657	-593.491	-648.750	-690.728	
	MACH-BAR-P	0.563	0.569	0.589	0.615	0.648	0.691	0.727	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.765	18.219	18.826	18.767	18.297	18.047	17.824	18.452
ROTOR	T-TOTAL	558.12	557.72	559.31	558.04	559.52	561.79	562.32	559.21
-----	P-STATIC	14.095	14.216	14.487	14.726	14.925	15.112	15.201	
PR = 1.2667	BETABAR	57.462	52.927	50.571	50.317	54.419	56.685	56.972	
TR = 1.0781	EPSILON	-2.885	-2.013	-3.088	-5.125	-6.551	-6.770	-6.818	
EFF-A = 0.8973	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
EFF-P = 0.8984	V-BAR	654.989	677.102	696.185	669.880	616.435	577.602	548.042	
	VZ-BAR	352.296	408.194	442.167	427.754	358.708	317.251	298.713	
	V-THET-BAR	552.175	540.152	537.738	515.518	501.278	482.675	459.479	
	MACH-BAR	0.584	0.606	0.623	0.599	0.547	0.510	0.482	
	U-WHEEL	629.323	647.783	684.708	721.633	758.557	795.483	813.945	
	V-BAR-PR	360.645	422.158	465.960	474.887	441.534	445.639	463.547	
	BETABAR-PR	12.352	14.759	18.385	25.731	35.660	44.585	49.879	
	V-THET-B-P	-77.147	-107.631	-146.970	-206.115	-257.279	-312.807	-354.466	
	MACH-BAR-P	0.322	0.378	0.417	0.424	0.392	0.393	0.408	
	D-FACTOR	0.629	0.532	0.490	0.496	0.576	0.605	0.600	
	TURNING	36.0	35.2	34.4	28.3	20.7	13.9	9.8	
	INCID-M	-9.0	-6.2	-2.5	-1.5	-0.6	-0.1	-0.1	
	DEVIATION	24.2	18.5	9.8	8.1	10.5	13.4	16.0	
	OMEGABAR-P	0.292	0.184	0.016	0.020	0.147	0.225	0.259	
	LOSS PAR	0.100	0.050	0.006	0.007	0.050	0.071	0.075	
	PT-RATIO	1.218	1.252	1.297	1.285	1.254	1.238	1.223	1.2667
	EFF-AD	0.765	0.882	0.987	0.981	0.850	0.758	0.705	0.8973
	EFF-POLY	0.771	0.885	0.987	0.981	0.854	0.764	0.713	0.8984
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.765	18.207	18.815	18.782	18.308	18.051	17.824	18.452
	T-TOTAL	558.12	557.72	559.28	558.03	559.45	561.78	562.32	559.21
	P-STATIC	14.115	14.207	14.415	14.635	14.829	15.010	15.099	
	BETABAR	57.857	53.062	50.161	49.668	53.495	55.683	55.845	
	EPSILON	-0.113	-1.012	-2.564	-4.051	-5.530	-7.046	-7.979	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	653.056	677.059	701.722	679.141	626.653	588.593	559.255	
	VZ-BAR	347.452	406.904	449.544	439.556	372.823	331.832	313.986	
	V-THET-BAR	552.955	541.044	538.816	517.705	503.645	486.136	462.795	
	MACH-BAR	0.583	0.606	0.629	0.608	0.557	0.520	0.493	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.207	17.742	18.431	18.442	17.928	17.599	17.295	18.045
ROTOR PLUS STATOR	T-TOTAL	558.12	557.70	559.20	558.10	559.18	561.71	562.32	559.21
----------	P-STATIC	16.258	16.261	16.262	16.250	16.228	16.200	16.184	
PR = 1.2387	BETABAR	16.446	16.477	16.676	16.749	15.398	12.412	8.143	
TR = 1.0781	EPSILON	0.450	0.021	-0.849	-1.795	-2.862	-4.543	-5.489	
EFF-A = 0.8077	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8135	V-BAR	328.333	405.421	485.853	487.935	434.198	397.221	356.298	
	VZ-BAR	314.900	388.771	465.417	467.235	418.611	387.913	352.706	
	V-THET-BAR	92.955	114.996	139.426	140.613	115.292	85.418	50.466	
IGV,ROTOR,STATOR	MACH-BAR	0.286	0.355	0.427	0.429	0.380	0.346	0.309	
----------	EFF-POLY	0.815	0.838	0.855	0.847	0.822	0.752	0.696	
PR = 1.2280	INCID-M	2.2	0.4	-0.7	-0.8	2.0	2.1	1.1	
TR = 1.0781	DEVIATION	15.7	15.2	15.8	16.4	16.0	14.4	11.1	
EFF-A = 0.7762	OMEGA-BAR	0.153	0.116	0.087	0.082	0.109	0.149	0.194	
EFF-P = 0.7804	LOSS PAR	0.052	0.040	0.032	0.031	0.044	0.063	0.085	
	D-FACTOR	0.747	0.629	0.524	0.508	0.570	0.626	0.693	
	TURNING	41.4	36.6	33.5	32.9	38.1	43.3	47.7	

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Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 92)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.412	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29005.0	P-STATIC	14.112	14.112	14.115	14.121	14.130	14.143	14.150	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.025	-2.628	-4.096	-5.691	-7.241	-8.067	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	267.683	267.558	266.774	265.395	263.239	260.310	258.475	
	VZ-BAR	267.683	267.558	266.774	265.395	263.239	260.310	258.475	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.241	0.241	0.240	0.239	0.237	0.234	0.233	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.588	14.561	14.520	14.601	14.600	14.588	14.579	14.576
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.571	13.588	13.620	13.653	13.685	13.714	13.726	
	BETABAR	29.790	29.576	29.852	29.963	28.702	25.814	23.117	
	EPSILON	-0.000	-0.987	-2.557	-4.019	-5.625	-7.231	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	356.819	349.100	336.024	344.092	337.857	330.231	326.277	
	VZ-BAR	309.666	303.614	291.438	298.103	296.341	297.267	300.079	
	V-THET-BAR	177.277	172.307	167.260	171.854	162.259	143.802	128.099	
	MACH-BAR	0.323	0.316	0.304	0.311	0.305	0.298	0.295	
	INCID-R	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-3.3	-4.2	-5.3	-6.5	-9.2	-13.4	-16.8	
	OMEGABAR	0.182	0.229	0.301	0.163	0.167	0.193	0.212	
	TURNING	-29.8	-29.6	-29.9	-30.0	-28.7	-25.8	-23.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.588	14.561	14.521	14.602	14.600	14.588	14.579	14.576
WCOR= 2.432	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29005.0	P-STATIC	13.139	13.157	13.181	13.207	13.237	13.259	13.263	
	BETABAR	24.428	24.259	24.416	24.925	23.941	21.544	19.280	
	EPSILON	-1.170	-1.478	-3.513	-5.833	-7.681	-7.632	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	428.338	421.794	412.297	419.769	414.851	409.607	407.667	
	VZ-BAR	389.996	384.550	375.424	380.672	379.157	380.983	384.804	
	V-THET-BAR	177.136	173.298	170.426	176.903	168.344	150.413	134.605	
	MACH-BAR	0.389	0.383	0.374	0.381	0.377	0.372	0.370	
	U-WHEEL	635.577	654.495	692.336	730.177	768.018	805.859	824.779	
	V-BAR-PR	601.885	615.993	642.915	671.587	709.493	758.132	790.199	
	BETABAR-PR	49.612	51.368	54.270	55.469	57.694	59.831	60.858	
	V-THET-B-P	-458.441	-481.198	-521.910	-553.274	-599.674	-655.445	-690.174	
	MACH-BAR-P	0.547	0.560	0.584	0.610	0.644	0.688	0.717	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.809	18.349	18.999	18.910	18.302	18.103	17.941	18.571
ROTOR	T-TOTAL	559.83	559.01	561.01	558.97	560.61	562.87	564.09	560.40
-----	P-STATIC	14.258	14.395	14.680	14.925	15.120	15.306	15.396	
PR = 1.2741	BETABAR	62.823	55.061	52.111	51.259	56.963	59.258	61.293	
TR = 1.0804	EPSILON	-2.885	-1.961	-3.138	-5.337	-6.843	-6.887	-6.418	
EFF-A = 0.8937	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.8951	V-BAR	643.445	670.688	691.983	662.539	598.011	562.630	538.304	
	VZ-BAR	293.888	384.117	424.970	414.635	326.057	287.626	258.563	
	V-THET-BAR	572.407	549.614	546.114	516.748	501.263	483.540	472.141	
	MACH-BAR	0.573	0.599	0.618	0.591	0.529	0.495	0.472	
	U-WHEEL	628.110	646.535	683.388	720.242	757.096	793.949	812.376	
	V-BAR-PR	299.120	396.177	446.597	461.955	414.533	423.305	427.334	
	BETABAR-PR	10.732	14.136	17.901	26.146	38.130	47.175	52.767	
	V-THET-B-P	-55.702	-96.921	-137.275	-203.498	-255.833	-310.409	-340.235	
	MACH-BAR-P	0.266	0.354	0.399	0.412	0.367	0.373	0.375	
	D-FACTOR	0.730	0.574	0.526	0.518	0.618	0.638	0.648	
	TURNING	38.9	37.2	36.4	29.3	19.6	12.7	8.1	
	INCID-R	-7.8	-4.8	-1.0	-0.1	0.8	1.2	1.1	
	DEVIATION	22.6	17.9	9.3	8.5	12.9	16.0	18.9	
	OMEGABAR-P	0.352	0.158	0.028	0.015	0.173	0.240	0.281	
	LOSS PAR	0.121	0.055	0.010	0.005	0.058	0.072	0.076	
	PT-RATIO	1.221	1.260	1.308	1.294	1.254	1.241	1.231	1.2741
	EFF-AD	0.790	0.879	0.978	0.987	0.827	0.749	0.699	0.8937
	EFF-POLY	0.747	0.882	0.978	0.986	0.832	0.755	0.707	0.8951
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.809	18.336	18.988	18.928	18.319	18.106	17.941	18.571
	T-TOTAL	559.83	559.00	560.97	558.98	560.53	562.83	564.09	560.40
	P-STATIC	14.269	14.381	14.612	14.849	15.042	15.218	15.307	
	BETABAR	63.173	55.187	51.712	50.714	56.067	58.296	60.154	
	EPSILON	-0.113	-1.227	-2.765	-4.289	-5.482	-7.025	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	642.349	671.047	697.088	670.769	607.228	572.205	548.265	
	VZ-BAR	289.886	383.123	431.923	424.738	339.008	300.736	272.852	
	V-THET-BAR	573.216	550.708	547.151	519.156	503.729	486.792	475.549	
	MACH-BAR	0.572	0.599	0.623	0.599	0.538	0.504	0.482	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.339	17.907	18.565	18.517	17.931	17.691	17.442	18.137
ROTOR PLUS STATOR	T-TOTAL	559.83	558.99	560.88	559.08	560.17	562.64	564.09	560.40
----------	P-STATIC	16.408	16.410	16.410	16.397	16.377	16.352	16.338	
PR = 1.2443	BETABAR	17.745	17.309	17.079	16.947	15.422	12.289	7.575	
TR = 1.0804	EPSILON	0.450	-0.180	-0.932	-1.720	-2.560	-4.313	-5.489	
EFF-A = 0.8017	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8077	V-BAR	324.479	406.100	483.089	478.835	414.821	387.575	358.191	
	VZ-BAR	309.041	387.717	461.786	458.040	399.883	378.669	351.101	
	V-THET-BAR	98.896	120.801	141.877	139.578	110.315	82.523	46.690	
IGV,ROTOR,STATOR	MACH-BAR	0.282	0.355	0.423	0.420	0.362	0.337	0.307	
----------	EFF-POLY	0.838	0.847	0.839	0.813	0.815	0.764	0.697	
PR = 1.2343	INCID-R	7.5	2.5	0.9	0.2	4.6	4.7	5.4	
TR = 1.0804	DEVIATION	17.0	16.0	16.2	16.6	16.1	14.3	10.5	
EFF-A = 0.7731	OMEGA-BAR	0.133	0.109	0.097	0.101	0.118	0.144	0.189	
EFF-P = 0.7778	LOSS PAR	0.045	0.038	0.035	0.038	0.047	0.061	0.083	
	D-FACTOR	0.757	0.628	0.529	0.518	0.594	0.635	0.704	
	TURNING	45.4	37.9	34.6	33.8	40.6	46.0	52.6	

Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 93)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.336	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29146.0	P-STATIC	14.163	14.163	14.166	14.171	14.179	14.189	14.196	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.994	-2.560	-4.021	-5.644	-7.207	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	255.456	255.340	254.699	253.504	251.589	248.953	247.282	
	VZ-BAR	255.456	255.340	254.699	253.504	251.589	248.953	247.282	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.001	0.000	
	MACH-BAR	0.230	0.230	0.229	0.228	0.226	0.224	0.223	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.595	14.569	14.531	14.607	14.606	14.594	14.586	14.583
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.681	13.657	13.686	13.719	13.750	13.777	13.789	
	BETABAR	31.005	30.394	30.288	29.955	28.586	25.674	22.110	
	EPSILON	-0.000	-0.956	-2.485	-3.981	-5.572	-7.210	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	345.264	337.724	325.231	332.644	326.413	318.818	314.936	
	VZ-BAR	295.935	291.308	280.838	288.209	286.621	287.328	291.777	
	V-THET-BAR	177.848	170.871	164.029	166.094	156.781	138.129	118.537	
	MACH-BAR	0.312	0.305	0.294	0.301	0.295	0.288	0.284	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-2.1	-3.4	-4.9	-6.6	-9.3	-13.6	-17.8	
	OMEGABAR	0.188	0.236	0.309	0.167	0.172	0.200	0.218	
	TURNING	-31.0	-30.4	-30.3	-30.0	-28.6	-25.7	-22.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.595	14.569	14.532	14.608	14.605	14.593	14.586	14.583
WCOR= 2.354	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29146.0	P-STATIC	13.240	13.257	13.280	13.305	13.333	13.355	13.359	
	BETABAR	25.446	24.967	24.834	24.958	23.888	21.451	18.473	
	EPSILON	-1.170	-1.301	-3.547	-6.037	-8.062	-7.976	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	413.593	407.110	397.945	405.168	400.163	394.875	393.113	
	VZ-BAR	373.470	369.065	361.146	367.333	365.882	367.510	372.859	
	V-THET-BAR	177.707	171.841	167.133	170.960	162.048	144.410	124.557	
	MACH-BAR	0.376	0.369	0.361	0.368	0.363	0.358	0.356	
	U-WHEEL	638.667	657.677	695.702	733.727	771.751	809.776	828.789	
	V-BAR-PR	593.265	610.135	640.170	672.046	711.068	760.121	796.847	
	BETABAR-PR	50.986	52.775	55.656	58.865	59.030	61.085	62.101	
	V-THET-R-P	-460.959	-485.836	-528.568	-562.766	-609.703	-665.366	-704.231	
	MACH-BAR-P	0.539	0.554	0.581	0.610	0.645	0.689	0.723	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.882	18.555	19.105	18.966	18.352	18.143	18.000	18.676
ROTOR	T-TOTAL	561.23	560.12	561.22	559.23	560.83	563.46	565.38	560.83
-----	P-STATIC	14.858	14.608	14.901	15.146	15.337	15.516	15.603	
PR = 1.2807	BETABAR	68.005	56.699	52.956	52.181	58.592	61.656	64.320	
TR = 1.0812	EPSILON	-2.885	-1.759	-3.150	-5.621	-7.205	-7.076	-6.418	
EFF-A = 0.9042	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
EFF-P = 0.9051	V-BAR	630.280	666.615	679.808	646.651	580.319	543.935	521.321	
	VZ-BAR	236.056	366.010	409.534	396.516	302.427	258.280	225.908	
	V-THET-BAR	584.405	556.839	542.605	510.813	495.280	478.678	469.831	
	MACH-BAR	0.559	0.594	0.606	0.576	0.513	0.478	0.456	
	U-WHEEL	631.163	649.677	686.711	723.743	760.776	797.809	816.325	
	V-BAR-PR	240.643	377.629	438.155	450.131	402.461	410.698	413.638	
	BETABAR-PR	11.204	14.194	19.385	28.238	41.280	51.008	56.896	
	V-THET-R-P	-46.758	-92.838	-144.106	-212.930	-265.496	-319.131	-346.495	
	MACH-BAR-P	0.214	0.337	0.387	0.401	0.356	0.361	0.362	
	D-FACTOR	0.832	0.604	0.544	0.537	0.637	0.658	0.673	
	TURNING	39.8	38.6	36.3	28.6	17.8	10.1	5.2	
	INCID-M	-6.4	-3.4	0.4	1.3	2.1	2.4	2.3	
	DEVIATION	23.1	17.9	10.8	10.6	16.1	19.8	23.0	
	OMEGABAR-P	0.388	0.144	0.011	0.011	0.168	0.244	0.294	
	LOSS PAR	0.133	0.050	0.004	0.004	0.053	0.068	0.072	
	PT-RATIO	1.225	1.273	1.314	1.298	1.257	1.243	1.234	1.2807
	EFF-AD	0.730	0.896	0.991	0.991	0.832	0.745	0.689	0.9042
	EFF-POLY	0.737	0.898	0.991	0.990	0.837	0.752	0.697	0.9051
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.882	18.540	19.099	18.984	18.367	18.147	18.000	18.676
	T-TOTAL	561.23	560.13	561.20	559.25	560.75	563.40	565.38	560.83
	P-STATIC	14.460	14.590	14.841	15.080	15.267	15.437	15.524	
	BETABAR	68.253	56.815	52.597	51.723	57.716	60.668	63.178	
	EPSILON	-0.113	-1.493	-2.957	-4.402	-5.230	-6.845	-7.979	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	630.074	667.240	684.653	653.948	588.764	552.749	530.272	
	VZ-BAR	233.447	365.229	415.867	405.110	314.491	270.805	239.269	
	V-THET-BAR	585.230	558.071	543.879	513.353	497.704	481.846	473.222	
	MACH-BAR	0.559	0.595	0.611	0.583	0.521	0.486	0.465	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.361	18.020	18.623	18.586	17.982	17.684	17.545	18.196
ROTOR PLUS STATOR	T-TOTAL	561.23	560.12	561.17	559.35	560.34	563.03	565.38	560.83
-----------------	P-STATIC	16.533	16.580	16.544	16.531	16.502	16.476	16.461	
PR = 1.2477	BETABAR	17.096	16.842	17.060	16.848	15.567	12.154	8.141	
TR = 1.0812	EPSILON	0.850	-0.429	-1.059	-1.700	-2.412	-4.115	-5.489	
EFF-A = 0.8037	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
EFF-P = 0.8097	V-BAR	305.807	402.839	473.414	470.368	403.904	367.963	350.267	
	VZ-BAR	292.295	385.560	452.583	450.178	389.080	359.691	346.738	
	V-THET-BAR	89.896	116.718	138.888	136.329	108.412	77.496	49.600	
IGV,ROTOR,STATOR	MACH-BAR	0.265	0.351	0.415	0.413	0.352	0.320	0.303	
----------------	EFF-POLY	0.818	0.874	0.811	0.807	0.805	0.733	0.695	
PR = 1.2383	INCID-M	12.6	4.2	1.8	1.2	6.2	7.0	8.4	
TR = 1.0812	DEVIATION	16.3	15.5	16.2	16.5	16.2	14.1	11.1	
EFF-A = 0.7776	OMEGA-BAR	0.152	0.132	0.112	0.102	0.124	0.171	0.184	
EFF-P = 0.7819	LOSS PAR	0.052	0.046	0.041	0.039	0.050	0.072	0.080	
	D-FACTOR	0.793	0.638	0.535	0.518	0.598	0.658	0.697	
	TURNING	51.2	40.0	35.5	34.9	42.1	48.5	55.0	

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Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 94)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.244	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24008.0	P-STATIC	14.213	14.214	14.217	14.222	14.230	14.240	14.246	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.101	-2.752	-4.217	-5.800	-7.277	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	242.920	242.782	242.002	240.705	238.693	236.022	234.395	
	VZ-BAR	242.920	242.782	242.002	240.705	238.693	236.022	234.395	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.219	0.218	0.218	0.217	0.215	0.212	0.211	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.603	14.579	14.545	14.614	14.612	14.601	14.594	14.592
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.728	13.742	13.768	13.797	13.828	13.849	13.860	
	BETABAR	28.168	28.782	30.122	30.266	29.259	26.994	24.033	
	EPSILON	-0.000	-1.061	-2.674	-4.135	-5.724	-7.272	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	330.130	323.125	311.375	318.869	312.895	305.536	301.994	
	VZ-BAR	291.033	283.208	269.325	275.406	272.975	272.281	275.815	
	V-THET-BAR	155.839	155.571	156.263	160.713	152.930	138.681	122.988	
	MACH-BAR	0.298	0.292	0.281	0.288	0.282	0.276	0.272	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.9	-5.0	-5.0	-6.2	-8.6	-12.2	-15.9	
	OMEGABAR	0.191	0.240	0.313	0.170	0.177	0.206	0.224	
	TURNING	-28.2	-28.8	-30.1	-30.3	-29.3	-27.0	-24.0	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.603	14.579	14.545	14.615	14.612	14.601	14.594	14.594
WCOR= 2.260	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24008.0	P-STATIC	13.360	13.375	13.398	13.422	13.447	13.466	13.470	
	BETABAR	23.194	23.695	24.755	25.310	24.525	22.611	20.130	
	EPSILON	-1.170	-1.834	-3.780	-5.567	-6.928	-7.102	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	395.368	389.391	380.255	386.938	382.376	377.347	375.526	
	VZ-BAR	363.412	356.565	345.312	349.795	347.877	348.337	352.588	
	V-THET-BAR	155.715	156.481	159.226	165.422	158.722	145.079	129.235	
	MACH-BAR	0.359	0.353	0.345	0.351	0.346	0.342	0.340	
	U-WHEEL	526.079	541.738	573.060	604.382	635.703	667.025	682.686	
	V-BAR-PR	518.882	524.950	538.985	561.290	590.372	627.512	656.221	
	BETABAR-PR	45.543	47.214	50.157	51.448	53.894	56.280	57.500	
	V-THET-B-P	-370.364	-385.257	-413.834	-438.959	-476.981	-521.945	-553.450	
	MACH-BAR-P	0.471	0.476	0.488	0.509	0.535	0.568	0.594	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	16.634	17.051	17.152	17.094	16.787	16.502	16.369	16.915
ROTOR	T-TOTAL	543.60	543.15	544.34	543.01	543.77	543.95	544.64	543.65
-----	P-STATIC	13.778	13.848	14.007	14.155	14.279	14.394	14.449	
PR = 1.1592	BETABAR	49.536	44.873	45.942	45.054	48.024	48.724	49.286	
TR = 1.0481	EPSILON	-2.885	-2.344	-3.520	-5.198	-6.482	-6.720	-6.418	
EFF-A = 0.8980	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
EFF-P = 0.8987	V-BAR	584.959	613.595	606.389	585.020	539.357	500.209	478.639	
	VZ-BAR	379.619	434.845	421.670	413.287	360.753	329.988	312.210	
	V-THET-BAR	445.045	432.884	435.776	414.052	400.943	375.920	362.795	
	MACH-BAR	0.526	0.553	0.546	0.526	0.483	0.446	0.426	
	U-WHEEL	519.899	535.149	565.654	596.158	626.663	657.167	672.419	
	V-BAR-PR	386.929	446.713	441.229	451.675	425.631	433.642	439.707	
	BETABAR-PR	11.155	13.230	17.119	23.783	32.038	40.437	44.762	
	V-THET-B-P	-74.853	-102.265	-129.878	-182.107	-225.720	-281.247	-309.624	
	MACH-BAR-P	0.348	0.403	0.397	0.406	0.381	0.387	0.391	
	D-FACTOR	0.447	0.336	0.375	0.375	0.455	0.473	0.487	
	TURNING	34.4	34.0	33.0	27.7	21.9	15.8	12.7	
	INCID-M	-11.8	-8.9	-5.1	-4.1	-3.0	-2.4	-2.3	
	DEVIATION	23.0	17.0	8.5	6.1	6.8	9.2	10.9	
	OMEGABAR-P	0.235	0.030	0.028	0.023	0.154	0.212	0.254	
	LOSS PAR	0.081	0.011	0.010	0.009	0.055	0.071	0.081	
	PT-RATIO	1.139	1.170	1.179	1.169	1.146	1.130	1.122	1.1592
	EFF-AD	0.791	0.973	0.975	0.976	0.825	0.733	0.668	0.8980
	EFF-POLY	0.794	0.972	0.974	0.975	0.827	0.736	0.672	0.8987
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	16.634	17.042	17.152	17.102	16.755	16.504	16.369	16.915
	T-TOTAL	543.60	543.15	544.35	543.00	543.77	543.94	544.64	543.65
	P-STATIC	13.802	13.839	13.942	14.073	14.195	14.307	14.361	
	BETABAR	49.937	44.953	45.453	44.383	47.177	47.769	48.222	
	EPSILON	-0.113	-0.996	-2.711	-4.441	-5.716	-7.106	-7.979	
	K-BAR	0.880	0.880	0.880	0.880	0.880	0.880	0.880	
	V-BAR	582.327	613.854	613.071	594.514	549.756	511.252	490.005	
	VZ-BAR	374.606	434.427	430.063	424.894	373.701	343.623	326.463	
	V-THET-BAR	445.674	433.651	436.920	415.825	403.203	378.552	365.414	
	MACH-BAR	0.523	0.553	0.552	0.535	0.492	0.456	0.436	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.215	16.599	16.965	16.930	16.546	16.254	16.075	16.663
ROTOR PLUS STATOR	T-TOTAL	543.60	543.15	544.25	543.03	543.75	543.92	544.64	543.65
----------	P-STATIC	15.164	15.167	15.165	15.151	15.128	15.103	15.089	
PR = 1.1420	BETABAR	15.733	15.397	15.236	14.964	14.994	12.403	8.089	
TR = 1.0481	EPSILON	0.450	0.083	-0.763	-1.990	-3.203	-4.690	-5.489	
EFF-A = 0.8037	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.8074	V-BAR	351.914	407.320	454.124	451.370	406.328	368.430	342.544	
	VZ-BAR	338.730	392.704	438.162	436.064	392.493	359.807	339.136	
	V-THET-BAR	95.423	108.137	119.342	116.585	105.127	79.165	48.202	
IGV,ROTOR,STATOR	MACH-BAR	0.311	0.361	0.403	0.401	0.360	0.326	0.302	
----------	EFF-POLY	0.785	0.775	0.889	0.876	0.835	0.780	0.730	
PR = 1.1340	INCID-B	-5.7	-7.7	-5.4	-6.1	-4.3	-5.9	-6.6	
TR = 1.0481	DEVIATION	15.0	14.1	14.3	14.6	15.6	14.4	11.0	
EFF-A = 0.7617	OMEGA-BAR	0.148	0.138	0.058	0.057	0.081	0.114	0.146	
EFF-P = 0.7647	LOSS PAR	0.050	0.048	0.021	0.022	0.033	0.048	0.064	
	D-FACTOR	0.609	0.528	0.458	0.486	0.492	0.538	0.591	
	TURNING	34.2	29.6	30.2	29.4	32.2	35.4	40.1	

Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 95)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.180	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24082.0	P-STATIC	14.233	14.238	14.236	14.241	14.248	14.257	14.263	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.101	-2.786	-4.216	-5.788	-7.234	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	237.751	237.627	236.932	235.716	233.857	231.412	229.859	
	VZ-BAR	237.751	237.627	236.932	235.716	233.857	231.412	229.859	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.214	0.214	0.213	0.212	0.210	0.208	0.207	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.608	14.586	14.554	14.619	14.617	14.605	14.599	14.598
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.772	13.784	13.807	13.835	13.861	13.885	13.897	
	BETABAR	28.190	28.732	30.083	30.266	29.324	26.934	19.538	
	EPSILON	-0.000	-1.057	-2.665	-4.165	-5.718	-7.242	-8.118	
	K-BAR	0.940	0.940	0.940	0.940	0.939	0.939	0.940	
	V-BAR	322.425	315.929	305.115	312.056	306.280	298.946	295.189	
	VZ-BAR	284.180	277.032	268.017	269.520	267.035	266.485	278.192	
	V-THET-BAR	152.315	151.868	152.939	157.282	149.999	135.408	98.720	
	MACH-BAR	0.291	0.285	0.275	0.282	0.276	0.270	0.266	
	INCID-R	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.9	-5.0	-5.1	-6.2	-8.6	-12.3	-20.4	
	OMEGABAR	0.188	0.236	0.307	0.166	0.174	0.204	0.221	
	TURNING	-28.2	-28.7	-30.1	-30.3	-29.3	-26.9	-19.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.608	14.585	14.554	14.620	14.617	14.605	14.599	14.596
WCOR= 2.194	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24082.0	P-STATIC	13.419	13.432	13.454	13.476	13.500	13.518	13.522	
	BETABAR	23.193	23.658	24.763	25.320	24.605	22.541	16.401	
	EPSILON	-1.170	-1.705	-3.446	-5.284	-6.727	-6.951	-6.637	
	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
	V-BAR	386.441	380.691	372.002	378.518	374.109	369.076	367.383	
	VZ-BAR	355.210	348.698	337.794	342.156	340.139	340.855	352.434	
	V-THET-BAR	152.194	152.758	155.820	161.880	155.765	141.478	103.734	
	MACH-BAR	0.350	0.345	0.337	0.343	0.339	0.334	0.333	
	U-WHEEL	527.701	543.408	574.826	606.244	637.662	669.081	684.790	
	V-BAR-PR	516.894	523.648	538.216	560.834	589.854	628.136	679.584	
	BETABAR-PR	46.591	48.247	51.124	52.403	54.783	57.133	58.762	
	V-THET-B-P	-375.507	-390.650	-419.006	-444.364	-481.897	-527.603	-581.056	
	MACH-BAR-P	0.469	0.474	0.487	0.508	0.534	0.569	0.615	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	16.634	16.990	17.266	17.253	16.906	16.763	16.457	17.035
ROTOR	T-TOTAL	544.17	544.36	545.54	543.84	545.11	545.68	545.67	544.89
-----	P-STATIC	13.985	14.065	14.241	14.396	14.525	14.648	14.703	
PR = 1.1670	BETABAR	52.684	48.874	48.441	46.745	51.336	50.728	49.255	
TR = 1.0505	EPSILON	-2.865	-2.281	-3.259	-5.114	-6.366	-6.641	-6.418	
EFF-A = 0.8953	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8957	V-BAR	562.255	586.273	592.468	573.807	527.261	497.795	455.828	
	VZ-BAR	340.847	385.612	393.040	393.208	329.418	315.074	297.519	
	V-THET-BAR	447.161	441.583	443.326	417.897	411.673	385.384	345.343	
	MACH-BAR	0.504	0.527	0.532	0.515	0.471	0.443	0.404	
	U-WHEEL	521.501	536.799	567.397	597.996	628.595	659.193	674.492	
	V-BAR-PR	348.860	397.199	412.168	432.519	394.472	417.496	443.685	
	BETABAR-PR	12.304	13.865	17.519	24.613	33.369	40.980	47.889	
	V-THET-B-P	-74.340	-95.216	-124.071	-180.099	-216.922	-273.808	-329.149	
	MACH-BAR-P	0.313	0.357	0.370	0.388	0.352	0.372	0.394	
	D-FACTOR	0.523	0.438	0.435	0.413	0.513	0.511	0.504	
	TURNING	34.3	34.4	33.6	27.8	21.4	16.2	10.9	
	INCID-R	-10.8	-7.9	-4.1	-3.1	-2.1	-1.5	-1.0	
	DEVIATION	24.2	17.6	8.9	6.9	8.2	9.8	14.0	
	OMEGABAR-P	0.264	0.113	0.038	0.002	0.153	0.191	0.246	
	LOSS PAR	0.090	0.039	0.014	0.001	0.058	0.063	0.074	
	PT-RATIO	1.139	1.165	1.186	1.180	1.157	1.148	1.127	1.1670
	EFF-AD	0.771	0.902	0.967	0.999	0.836	0.774	0.671	0.8953
	EFF-POLY	0.774	0.903	0.967	0.997	0.838	0.777	0.675	0.8957
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	16.634	16.984	17.263	17.263	16.909	16.767	16.457	17.035
	T-TOTAL	544.17	544.35	545.53	543.82	545.09	545.68	545.67	544.89
	P-STATIC	13.993	14.047	14.179	14.322	14.444	14.565	14.621	
	BETABAR	52.916	48.833	47.922	46.054	50.397	49.820	48.179	
	EPSILON	-0.113	-1.282	-2.722	-3.791	-5.567	-6.931	-7.979	
	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
	V-BAR	561.319	587.612	598.657	582.700	536.880	508.442	466.748	
	VZ-BAR	338.468	386.818	401.184	404.385	342.249	328.019	311.230	
	V-THET-BAR	447.793	442.293	444.344	419.536	413.638	388.473	347.836	
	MACH-BAR	0.503	0.528	0.538	0.523	0.480	0.453	0.414	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.319	16.691	17.086	17.066	16.679	16.459	16.178	16.798
ROTOR PLUS STATOR	T-TOTAL	544.17	544.33	545.52	543.89	545.03	545.68	545.67	544.89
-----------------	P-STATIC	15.417	15.423	15.425	15.413	15.389	15.363	15.347	
PR = 1.1508	BETABAR	16.217	15.989	15.842	15.764	15.782	13.198	9.702	
TR = 1.0505	EPSILON	0.450	-0.022	-1.053	-2.135	-3.245	-4.826	-5.489	
EFF-A = 0.8108	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8145	V-BAR	324.645	381.892	434.363	432.981	385.861	357.461	313.113	
	VZ-BAR	311.727	367.120	417.867	416.695	371.314	348.004	308.635	
	V-THET-BAR	90.668	105.187	118.571	117.633	104.947	81.645	52.767	
IGV,ROTOR,STATOR	MACH-BAR	0.286	0.338	0.385	0.384	0.341	0.315	0.275	
----------------	EFF-POLY	0.834	0.843	0.890	0.859	0.825	0.741	0.738	
PR = 1.1432	INCID-R	-2.7	-3.8	-2.9	-4.5	-1.1	-3.8	-6.6	
TR = 1.0505	DEVIATION	15.4	14.7	15.0	15.8	16.4	15.2	12.6	
EFF-A = 0.7737	OMEGA-BAR	0.119	0.100	0.057	0.067	0.093	0.140	0.152	
EFF-P = 0.7761	LOSS PAR	0.041	0.035	0.021	0.026	0.037	0.059	0.066	
	D-FACTOR	0.647	0.558	0.483	0.467	0.524	0.563	0.613	
	TURNING	36.7	32.8	32.1	30.3	34.6	36.6	38.5	

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Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 96)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.094	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24186.0	P-STATIC	14.250	14.250	14.253	14.258	14.264	14.273	14.279	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.095	-2.624	-4.297	-5.857	-7.301	-8.067	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	233.365	233.240	232.527	231.326	229.471	227.032	225.546	
	VZ-BAR	233.365	233.240	232.527	231.326	229.471	227.032	225.546	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.001	0.000	
	MACH-BAR	0.210	0.210	0.209	0.208	0.206	0.204	0.203	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.614	14.594	14.565	14.625	14.623	14.611	14.605	14.605
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.812	13.823	13.845	13.872	13.897	13.920	13.930	
	BETABAR	27.962	28.497	29.799	30.092	29.243	27.393	24.504	
	EPSILON	-0.000	-1.060	-2.727	-4.212	-5.798	-7.304	-8.118	
	K-BAR	0.920	0.920	0.920	0.920	0.919	0.919	0.920	
	V-BAR	315.619	309.662	299.417	305.735	299.970	292.827	289.219	
	VZ-BAR	278.951	272.162	259.827	264.530	261.739	259.966	263.170	
	V-THET-BAR	148.281	147.751	148.797	153.291	146.542	134.728	119.954	
	MACH-BAR	0.265	0.279	0.270	0.276	0.271	0.264	0.261	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-5.1	-5.3	-5.3	-6.4	-8.6	-11.8	-15.4	
	OMEGABAR	0.180	0.226	0.292	0.159	0.167	0.198	0.215	
	TURNING	-28.3	-28.5	-29.6	-30.1	-29.2	-27.4	-24.5	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.614	14.594	14.566	14.626	14.622	14.611	14.605	14.605
WCOR= 2.107	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24186.0	P-STATIC	13.473	13.486	13.506	13.527	13.550	13.569	13.573	
	BETABAR	23.022	23.487	24.552	25.186	24.542	22.973	20.539	
	EPSILON	-1.179	-1.647	-3.531	-5.643	-7.263	-7.378	-6.637	
	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	378.335	372.915	364.788	370.769	366.213	361.132	359.272	
	VZ-BAR	348.201	342.020	331.804	335.521	333.128	332.487	336.435	
	V-THET-BAR	147.963	148.618	151.578	157.781	152.109	140.946	126.047	
	MACH-BAR	0.343	0.338	0.330	0.336	0.332	0.327	0.325	
	U-WHEEL	529.979	545.755	577.309	608.863	640.417	671.970	687.747	
	V-BAR-PR	516.895	524.123	539.765	562.186	591.124	626.530	654.749	
	BETABAR-PR	47.651	49.264	52.067	53.356	55.696	57.947	59.060	
	V-THET-B-P	-382.016	-397.136	-425.730	-451.082	-488.307	-531.024	-561.700	
	MACH-BAR-P	0.468	0.475	0.489	0.509	0.535	0.567	0.592	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	16.634	17.053	17.425	17.361	16.992	16.816	16.582	17.143
ROTOR	T-TOTAL	545.10	545.40	546.65	544.93	546.16	547.01	546.97	545.97
------	P-STATIC	14.127	14.211	14.397	14.562	14.696	14.821	14.879	
PR = 1.1738	BETABAR	55.661	50.928	49.610	48.443	53.623	55.465	57.758	
TR = 1.0526	EPSILON	-2.885	-2.252	-3.424	-5.300	-6.734	-6.872	-6.418	
EFF-A = 0.8930	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
EFF-P = 0.8935	V-BAR	546.503	576.644	590.461	566.347	516.337	482.552	447.530	
	VZ-BAR	306.697	363.481	382.609	375.704	306.261	273.595	238.758	
	V-THET-BAR	452.330	447.609	449.726	423.780	415.662	397.485	378.520	
	MACH-BAR	0.489	0.517	0.529	0.507	0.460	0.428	0.396	
	U-WHEEL	523.753	539.117	569.847	600.578	631.309	662.040	677.405	
	V-BAR-PR	314.904	374.825	401.025	415.282	374.649	380.731	382.541	
	BETABAR-PR	13.109	14.125	17.430	25.206	35.163	44.031	51.381	
	V-THET-B-P	-71.423	-91.508	-120.121	-176.798	-215.647	-264.554	-298.885	
	MACH-BAR-P	0.262	0.336	0.359	0.372	0.334	0.338	0.339	
	D-FACTOR	0.595	0.488	0.465	0.453	0.556	0.575	0.586	
	TURNING	34.5	35.1	34.6	28.2	20.5	13.9	7.7	
	INCID-M	-9.7	-6.9	-3.2	-2.2	-1.2	-0.7	-0.7	
	DEVIATION	25.0	17.9	6.8	7.5	10.0	12.8	17.5	
	OMEGABAR-P	0.389	0.137	0.029	0.008	0.161	0.219	0.267	
	LOSS PAR	0.105	0.048	0.011	0.003	0.055	0.069	0.075	
	PT-RATIO	1.158	1.168	1.196	1.187	1.162	1.151	1.135	1.1738
	EFF-AD	0.741	0.885	0.975	0.992	0.831	0.752	0.679	0.8930
	EFF-POLY	0.745	0.886	0.975	0.991	0.833	0.756	0.684	0.8935
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	16.634	17.043	17.421	17.371	16.999	16.819	16.582	17.143
	T-TOTAL	545.10	545.38	546.63	544.93	546.12	547.01	546.97	545.97
	P-STATIC	14.143	14.204	14.344	14.494	14.621	14.744	14.801	
	BETABAR	56.268	51.054	49.188	47.811	52.596	54.363	56.320	
	EPSILON	-0.113	-0.979	-2.680	-4.570	-5.631	-7.195	-7.979	
	K-BAR	0.930	0.930	0.930	0.930	0.930	0.930	0.930	
	V-BAR	544.666	576.476	595.505	574.484	525.829	492.582	458.155	
	VZ-BAR	302.456	362.395	389.213	385.822	319.432	287.023	254.073	
	V-THET-BAR	452.969	448.252	450.710	425.640	417.641	400.312	381.252	
	MACH-BAR	0.487	0.517	0.534	0.515	0.469	0.438	0.406	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.389	16.793	17.214	17.213	16.800	16.508	16.257	16.916
ROTOR PLUS STATOR	T-TOTAL	545.10	545.35	546.60	544.95	545.99	547.00	546.97	545.97
----------	P-STATIC	15.632	15.638	15.642	15.631	15.608	15.583	15.569	
PR = 1.1582	BETABAR	15.944	16.369	16.572	16.745	15.910	12.003	8.211	
TR = 1.0526	EPSILON	0.450	-0.045	-0.901	-1.931	-3.013	-4.576	-5.489	
EFF-A = 0.8152	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8191	V-BAR	296.440	363.003	420.989	421.780	369.478	327.532	284.057	
	VZ-BAR	285.036	348.356	403.502	403.895	355.318	320.332	281.146	
	V-THET-BAR	81.431	102.349	120.076	121.519	101.298	68.191	40.568	
IGV,ROTOR,STATOR	MACH-BAR	0.261	0.320	0.372	0.374	0.326	0.288	0.249	
----------	EFF-POLY	0.869	0.867	0.879	0.889	0.855	0.747	0.717	
PR = 1.1512	INCID-M	0.6	-1.6	-1.6	-2.7	1.1	0.7	1.5	
TR = 1.0526	DEVIATION	15.2	15.1	15.7	16.4	16.5	14.0	11.2	
EFF-A = 0.7826	OMEGA-BAR	0.096	0.088	0.067	0.055	0.084	0.150	0.183	
EFF-P = 0.7850	LOSS PAR	0.034	0.031	0.024	0.021	0.033	0.063	0.080	
	D-FACTOR	0.697	0.587	0.505	0.482	0.553	0.633	0.713	
	TURNING	40.3	34.7	32.6	31.1	36.7	42.4	48.1	

Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 97)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 1.951	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24053.0	P-STATIC	14.318	14.319	14.321	14.325	14.331	14.338	14.343	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.095	-2.793	-4.287	-5.857	-7.300	-8.067	
	K-BAR	0.960	0.960	0.960	0.960	0.960	0.960	0.960	
	V-BAR	214.424	214.309	213.673	212.586	210.892	208.668	207.298	
	VZ-BAR	214.424	214.309	213.673	212.586	210.892	208.668	207.298	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.001	0.000	
	MACH-BAR	0.193	0.193	0.192	0.191	0.190	0.188	0.186	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.624	14.606	14.583	14.635	14.632	14.621	14.615	14.617
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.944	13.954	13.973	13.996	14.017	14.036	14.045	
	BETABAR	28.295	28.559	29.728	29.810	28.954	26.883	24.211	
	EPSILON	-0.000	-1.057	-2.693	-4.190	-5.782	-7.296	-8.116	
	K-BAR	0.925	0.925	0.925	0.925	0.924	0.924	0.925	
	V-BAR	290.224	284.552	275.035	281.117	275.675	268.839	265.406	
	VZ-BAR	255.548	249.929	238.837	243.921	241.217	239.779	242.062	
	V-THET-BAR	137.570	136.033	136.386	139.748	133.457	121.564	108.643	
	MACH-BAR	0.262	0.256	0.248	0.253	0.248	0.242	0.239	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.8	-5.2	-5.4	-6.7	-8.9	-12.4	-15.7	
	OMEGABAR	0.186	0.231	0.298	0.161	0.172	0.206	0.226	
	TURNING	-28.3	-28.6	-29.7	-29.6	-29.0	-26.9	-24.2	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.624	14.606	14.583	14.635	14.632	14.621	14.615	14.617
WCOR= 1.962	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24053.0	P-STATIC	13.659	13.670	13.686	13.705	13.726	13.742	13.745	
	BETABAR	23.336	23.578	24.532	24.995	24.358	22.609	20.340	
	EPSILON	-1.170	-1.531	-3.707	-6.114	-7.999	-7.933	-6.637	
	K-BAR	0.925	0.925	0.925	0.925	0.925	0.925	0.925	
	V-BAR	347.021	342.078	334.693	340.435	335.848	330.802	329.032	
	VZ-BAR	318.634	313.522	304.480	308.552	305.953	305.375	308.515	
	V-THET-BAR	137.460	136.826	138.965	143.845	138.517	127.171	114.371	
	MACH-BAR	0.314	0.309	0.302	0.308	0.303	0.299	0.297	
	U-WHEEL	527.065	542.754	574.134	605.514	636.895	668.275	683.965	
	V-BAR-PR	503.309	512.916	531.117	555.290	584.803	621.330	647.780	
	BETABAR-PR	50.722	52.318	55.019	56.242	58.453	60.560	61.556	
	V-THET-B-P	-389.605	-405.928	-435.169	-461.669	-498.378	-541.103	-569.594	
	MACH-BAR-P	0.455	0.464	0.480	0.502	0.528	0.561	0.585	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	16.634	17.157	17.629	17.488	17.050	16.877	16.795	17.275
ROTOR	T-TOTAL	546.71	546.76	548.03	546.52	547.43	548.92	549.82	547.46
-----	P-STATIC	14.341	14.433	14.634	14.804	14.936	15.059	15.120	
PR = 1.1819	BETABAR	62.222	53.577	50.958	50.666	57.134	60.975	62.888	
TR = 1.0554	EPSILON	-2.885	-1.899	-3.387	-5.706	-7.163	-7.033	-6.418	
EFF-A = 0.8840	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.8847	V-BAR	522.087	562.567	584.052	552.414	494.015	459.639	441.997	
	VZ-BAR	243.316	334.073	367.886	350.151	268.101	223.041	201.431	
	V-THET-BAR	461.922	452.483	453.624	427.264	414.925	401.875	393.429	
	MACH-BAR	0.465	0.503	0.523	0.494	0.439	0.407	0.390	
	U-WHEEL	520.873	536.152	566.714	597.276	627.838	658.399	673.680	
	V-BAR-PR	250.355	344.394	384.891	389.277	342.400	340.058	345.130	
	BETABAR-PR	13.619	14.052	17.086	25.900	36.458	46.966	54.293	
	V-THET-B-P	-58.951	-83.669	-113.090	-170.011	-212.913	-256.524	-280.251	
	MACH-BAR-P	0.223	0.308	0.344	0.348	0.304	0.301	0.305	
	D-FACTOR	0.726	0.547	0.499	0.507	0.618	0.650	0.658	
	TURNING	37.1	38.3	37.9	30.3	20.0	11.6	7.3	
	INCID-M	-0.7	-3.8	-0.3	0.7	1.6	1.9	1.8	
	DEVIATION	25.5	17.8	8.5	6.2	13.3	17.8	20.4	
	OMEGABAR-P	0.404	0.170	0.021	0.030	0.191	0.266	0.301	
	LOSS PAR	0.137	0.059	0.008	0.011	0.063	0.077	0.079	
	PT-RATIO	1.137	1.174	1.208	1.195	1.166	1.154	1.149	1.1819
	EFF-AD	0.695	0.870	0.984	0.973	0.809	0.720	0.676	0.8840
	EFF-POLY	0.699	0.872	0.984	0.972	0.812	0.725	0.682	0.8847
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	16.634	17.144	17.626	17.500	17.058	16.879	16.795	17.275
	T-TOTAL	546.71	546.75	548.06	546.55	547.39	548.89	549.82	547.46
	P-STATIC	14.353	14.432	14.593	14.753	14.877	14.990	15.050	
	BETABAR	62.697	53.859	50.692	50.175	56.148	59.656	61.371	
	EPSILON	-0.113	-1.323	-2.986	-4.428	-5.656	-7.109	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	520.572	561.462	588.078	559.180	502.136	468.804	451.463	
	VZ-BAR	238.788	331.200	372.542	358.134	279.725	236.864	216.309	
	V-THET-BAR	462.574	453.193	455.025	429.442	416.996	404.550	396.269	
	MACH-BAR	0.464	0.502	0.526	0.500	0.446	0.415	0.399	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.424	16.930	17.313	17.231	16.802	16.627	16.516	16.993
ROTOR PLUS STATOR	T-TOTAL	546.71	546.74	547.99	546.65	547.16	548.72	549.82	547.46
-----------------	P-STATIC	15.855	15.861	15.864	15.853	15.833	15.816	15.805	
PR = 1.1625	BETABAR	18.110	17.523	17.330	16.823	15.988	12.910	8.228	
TR = 1.0554	EPSILON	0.450	-0.174	-0.896	-1.629	-2.470	-4.116	-5.489	
EFF-A = 0.7930	K-BAR	0.940	0.940	0.940	0.940	0.940	0.940	0.940	
EFF-P = 0.7974	V-BAR	256.596	347.722	402.887	393.154	333.450	305.781	287.205	
	VZ-BAR	243.685	331.594	384.599	376.328	320.550	298.021	284.249	
	V-THET-BAR	79.761	104.671	120.007	113.789	91.852	68.345	41.100	
IGV,ROTOR,STATOR	MACH-BAR	0.225	0.306	0.355	0.347	0.293	0.268	0.251	
----------------	EFF-POLY	0.885	0.882	0.825	0.815	0.823	0.792	0.744	
PR = 1.1564	INCID-M	7.0	1.2	-0.1	-0.3	4.6	6.0	6.6	
TR = 1.0554	DEVIATION	17.3	16.2	16.4	16.5	16.6	14.9	11.2	
EFF-A = 0.7665	OMEGA-BAR	0.092	0.079	0.103	0.098	0.115	0.133	0.160	
EFF-P = 0.7693	LOSS PAR	0.031	0.027	0.038	0.037	0.046	0.056	0.070	
	D-FACTOR	0.768	0.606	0.532	0.530	0.614	0.665	0.716	
	TURNING	44.6	36.3	33.4	33.4	40.2	46.7	53.1	

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Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 98)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 1.910	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24047.0	P-STATIC	14.382	14.383	14.385	14.389	14.395	14.402	14.407	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.134	-2.815	-4.294	-5.877	-7.315	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	207.438	207.314	206.637	205.487	203.731	201.447	200.082	
	VZ-BAR	207.438	207.314	206.637	205.487	203.731	201.447	200.082	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.186	0.186	0.186	0.185	0.183	0.181	0.180	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.627	14.612	14.588	14.638	14.635	14.624	14.618	14.620
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.014	14.023	14.041	14.060	14.080	14.097	14.109	
	BETABAR	26.588	27.811	29.660	29.791	28.931	26.886	24.154	
	EPSILON	-0.000	-1.096	-2.727	-4.209	-5.803	-7.308	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	275.278	269.728	260.153	266.878	261.655	254.955	251.695	
	VZ-BAR	246.167	238.572	226.066	231.607	229.001	227.391	229.660	
	V-THET-BAR	123.207	125.838	128.738	132.596	126.576	115.295	102.990	
	MACH-BAR	0.248	0.243	0.234	0.240	0.236	0.230	0.227	
	INCID-R	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-6.5	-6.0	-5.5	-6.7	-8.9	-12.4	-15.8	
	OMEGABAR	0.191	0.236	0.304	0.164	0.175	0.212	0.233	
	TURNING	-26.6	-27.8	-29.7	-29.8	-28.9	-26.9	-24.2	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.627	14.611	14.588	14.638	14.635	14.624	14.618	14.620
WCOR= 1.920	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24047.0	P-STATIC	13.757	13.767	13.782	13.799	13.819	13.834	13.837	
	BETABAR	21.973	22.980	24.453	25.011	24.382	22.656	20.337	
	EPSILON	-1.170	-1.691	-3.814	-6.205	-8.227	-8.018	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	329.015	324.218	316.904	322.818	318.234	313.140	311.388	
	VZ-BAR	305.115	298.489	288.476	292.586	289.851	288.972	291.978	
	V-THET-BAR	123.109	126.572	131.182	136.486	131.374	120.620	108.221	
	MACH-BAR	0.297	0.293	0.286	0.292	0.287	0.283	0.281	
	U-WHEEL	526.934	542.618	573.991	605.363	636.736	668.108	683.795	
	V-BAR-PR	506.133	512.053	528.490	552.659	582.590	619.073	645.396	
	BETABAR-IR	52.927	54.342	56.916	58.038	60.162	62.173	63.102	
	V-THET-R-P	-403.825	-416.046	-442.809	-468.877	-505.362	-547.888	-575.574	
	MACH-BAR-P	0.457	0.462	0.477	0.499	0.526	0.559	0.582	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	16.810	17.261	17.670	17.565	17.057	16.867	16.866	17.324
ROTOR	T-TOTAL	547.18	547.66	548.61	546.82	547.70	549.48	550.76	547.97
-----	P-STATIC	14.476	14.565	14.758	14.923	15.049	15.170	15.231	
PR = 1.1849	BETABAR	59.756	54.152	51.872	50.655	58.572	64.482	65.183	
TR = 1.0564	EPSILON	-2.885	-2.079	-3.406	-5.768	-7.306	-7.046	-6.418	
EFF-A = 0.8826	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
EFF-P = 0.8832	V-BAR	524.247	558.275	574.869	586.740	480.895	443.828	435.921	
	VZ-BAR	264.054	326.979	354.932	346.631	250.794	191.223	182.966	
	V-THET-BAR	452.890	452.443	452.210	422.814	410.255	400.500	395.665	
	MACH-BAR	0.467	0.499	0.514	0.488	0.427	0.392	0.384	
	U-WHEEL	520.743	536.018	566.573	597.127	627.681	658.235	673.512	
	V-BAR-PR	272.633	337.491	372.923	388.009	332.059	321.033	332.679	
	BETABAR-PR	14.411	14.335	17.856	26.697	40.943	53.417	56.635	
	V-THET-R-P	-67.853	-83.576	-114.363	-174.313	-217.426	-257.735	-277.847	
	MACH-BAR-P	0.243	0.301	0.333	0.346	0.295	0.284	0.293	
	D-FACTOR	0.687	0.568	0.524	0.510	0.636	0.683	0.682	
	TURNING	38.5	40.0	39.1	31.3	19.2	8.8	6.5	
	INCID-R	-4.5	-1.8	1.6	2.5	3.3	3.5	3.3	
	DEVIATION	26.3	18.1	9.3	9.0	15.8	22.2	22.8	
	OMEGABAR-P	0.349	0.169	0.033	0.016	0.199	0.289	0.312	
	LOSS PAR	0.118	0.059	0.012	0.006	0.064	0.076	0.077	
	PT-RATIO	1.149	1.181	1.211	1.200	1.166	1.154	1.154	1.1849
	EFF-AD	0.739	0.874	0.975	0.986	0.803	0.703	0.676	0.8826
	EFF-POLY	0.743	0.876	0.975	0.985	0.806	0.708	0.681	0.8832
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	16.810	17.251	17.667	17.578	17.068	16.868	16.866	17.324
	T-TOTAL	547.18	547.65	548.66	546.86	547.65	549.44	550.76	547.97
	P-STATIC	14.489	14.560	14.724	14.882	15.005	15.118	15.177	
	BETABAR	60.179	54.325	51.690	50.316	57.730	63.358	64.037	
	EPSILON	-0.113	-1.333	-3.097	-4.338	-5.386	-6.961	-7.979	
	K-BAR	0.970	0.970	0.970	0.970	0.970	0.970	0.970	
	V-BAR	522.751	557.823	578.284	552.399	487.604	450.982	443.256	
	VZ-BAR	259.959	325.354	358.490	352.745	260.356	202.244	194.055	
	V-THET-BAR	453.530	453.032	453.757	425.106	412.250	403.074	398.520	
	MACH-BAR	0.466	0.498	0.517	0.493	0.433	0.399	0.391	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	16.563	16.983	17.336	17.270	16.826	16.636	16.560	17.020
ROTOR PLUS STATOR	T-TOTAL	547.18	547.61	548.64	547.02	547.36	549.18	550.76	547.97
----------	P-STATIC	15.841	15.844	15.842	15.833	15.820	15.806	15.798	
PR = 1.1641	BETABAR	17.407	17.331	17.158	16.935	16.044	12.926	8.488	
TR = 1.0564	EPSILON	0.450	-0.051	-0.828	-1.532	-2.187	-4.044	-5.489	
EFF-A = 0.7864	K-BAR	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
EFF-P = 0.7910	V-BAR	288.231	359.166	409.304	401.433	338.714	309.372	297.502	
	VZ-BAR	275.032	342.861	391.089	384.025	325.517	301.509	294.284	
	V-THET-BAR	86.226	106.991	120.745	116.934	93.622	69.220	43.911	
IGV,ROTOR,STATOR	MACH-BAR	0.253	0.316	0.361	0.354	0.298	0.271	0.260	
----------	EFF-POLY	0.856	0.844	0.795	0.767	0.808	0.784	0.685	
PR = 1.1582	INCID-R	4.5	1.7	0.9	-0.2	6.2	9.7	9.3	
TR = 1.0564	DEVIATION	16.6	16.0	16.3	16.6	16.7	14.9	11.4	
EFF-A = 0.7617	OMEGA-BAR	0.107	0.100	0.112	0.114	0.117	0.133	0.181	
EFF-P = 0.7646	LOSS PAR	0.036	0.035	0.041	0.043	0.047	0.056	0.079	
	D-FACTOR	0.698	0.581	0.512	0.505	0.590	0.640	0.687	
	TURNING	42.8	37.0	34.5	33.4	41.7	50.4	55.5	

Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 99)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 1.894	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24084.0	P-STATIC	14.349	14.349	14.351	14.355	14.360	14.367	14.371	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.095	-2.762	-4.266	-5.857	-7.300	-8.067	
	K-BAR	0.971	0.971	0.971	0.971	0.971	0.971	0.971	
	V-BAR	205.441	205.321	204.724	203.683	202.056	199.925	198.614	
	VZ-BAR	205.441	205.321	204.724	203.683	202.056	199.925	198.614	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.185	0.184	0.184	0.183	0.182	0.180	0.178	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.628	14.613	14.590	14.639	14.636	14.625	14.619	14.621
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.026	14.035	14.052	14.072	14.091	14.108	14.115	
	BETABAR	28.445	28.430	29.432	29.778	28.668	26.691	23.907	
	EPSILON	-0.000	-1.057	-2.687	-4.177	-5.782	-7.296	-8.118	
	K-BAR	0.950	0.950	0.950	0.950	0.949	0.949	0.950	
	V-BAR	272.727	267.215	257.964	264.443	259.198	252.530	249.195	
	VZ-BAR	239.803	234.989	224.670	229.526	227.423	225.614	227.816	
	V-THET-BAR	129.902	127.217	126.762	131.332	124.347	113.434	100.985	
	MACH-BAR	0.246	0.241	0.232	0.238	0.233	0.227	0.224	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-4.6	-5.3	-5.7	-6.7	-9.2	-12.5	-16.0	
	OMEGABAR	0.192	0.237	0.306	0.165	0.176	0.213	0.233	
	TURNING	-28.4	-28.4	-29.4	-29.8	-28.7	-26.7	-23.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.628	14.613	14.590	14.639	14.636	14.625	14.619	14.621
WCOR= 1.903	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24084.0	P-STATIC	13.774	13.783	13.796	13.814	13.834	13.850	13.852	
	BETABAR	23.466	23.476	24.297	24.996	24.153	22.469	20.113	
	EPSILON	-1.170	-1.720	-4.010	-6.577	-8.861	-8.821	-6.637	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	325.957	321.203	314.012	319.992	315.365	310.268	308.593	
	VZ-BAR	298.998	294.618	286.198	290.022	287.773	286.612	289.775	
	V-THET-BAR	129.799	127.953	129.203	135.213	129.049	118.658	106.114	
	MACH-BAR	0.294	0.290	0.283	0.289	0.285	0.280	0.278	
	U-WHEEL	527.744	543.453	574.874	606.295	637.716	669.136	684.647	
	V-BAR-PR	497.756	509.361	529.656	553.204	584.433	620.626	647.225	
	BETABAR-PR	53.080	54.659	57.291	58.380	60.500	62.495	63.403	
	V-THET-B-P	-397.946	-415.560	-445.671	-471.082	-508.666	-550.478	-578.732	
	MACH-BAR-P	0.450	0.460	0.478	0.499	0.528	0.560	0.584	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	16.857	17.318	17.693	17.630	17.091	16.854	16.883	17.375
ROTOR	T-TOTAL	547.23	547.70	548.63	546.96	547.79	549.51	551.12	548.01
	P-STATIC	14.536	14.629	14.820	14.984	15.106	15.227	15.287	
PR = 1.1884	BETABAR	61.776	54.640	52.179	50.624	58.766	66.167	67.667	
TR = 1.0565	EPSILON	-2.885	-1.923	-3.442	-5.945	-7.666	-7.273	-6.418	
EFF-A = 0.8966	K-BAR	0.980	0.980	0.980	0.980	0.979	0.980	0.980	
EFF-P = 0.8970	V-BAR	521.770	556.487	570.411	546.198	477.538	434.417	430.425	
	VZ-BAR	246.741	322.072	349.768	346.529	247.719	175.567	166.129	
	V-THET-BAR	459.741	453.755	450.584	422.181	408.116	397.318	396.230	
	MACH-BAR	0.465	0.497	0.509	0.488	0.424	0.383	0.379	
	U-WHEEL	521.544	536.844	567.444	598.045	628.646	659.248	674.548	
	V-BAR-PR	254.563	332.624	368.798	388.664	331.918	315.456	325.159	
	BETABAR-PR	14.062	14.463	18.470	26.917	41.723	56.162	58.864	
	V-THET-B-P	-61.803	-83.109	-116.860	-175.664	-220.531	-261.930	-278.316	
	MACH-BAR-P	0.227	0.297	0.329	0.347	0.294	0.278	0.267	
	D-FACTOR	0.719	0.575	0.533	0.513	0.640	0.694	0.696	
	TURNING	39.0	40.2	38.8	31.5	18.8	6.3	4.5	
	INCID-M	-4.3	-1.5	2.0	2.8	3.6	3.9	3.6	
	DEVIATION	25.9	18.2	9.9	9.2	16.5	24.9	25.0	
	OMEGABAR-P	0.342	0.149	0.026	-0.001	0.188	0.290	0.316	
	LOSS PAR	0.116	0.052	0.009	-0.000	0.060	0.071	0.073	
	PT-RATIO	1.152	1.185	1.212	1.204	1.168	1.153	1.155	1.1884
	EFF-AD	0.753	0.891	0.980	1.021	0.811	0.698	0.673	0.8966
	EFF-POLY	0.757	0.892	0.980	1.000	0.814	0.703	0.679	0.8970
STATOR LEADING EDGE	DIAMETER	4.956	5.096	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	16.857	17.305	17.688	17.652	17.112	16.855	16.883	17.375
	T-TOTAL	547.23	547.67	548.67	546.96	547.74	549.46	551.12	548.01
	P-STATIC	14.518	14.606	14.783	14.949	15.045	15.142	15.200	
	BETABAR	61.461	54.578	51.957	50.201	57.337	63.633	64.440	
	EPSILON	-0.113	-1.275	-3.215	-4.399	-5.367	-6.942	-7.979	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	524.068	557.744	573.914	552.072	487.325	446.248	442.385	
	VZ-BAR	250.374	323.294	353.670	353.386	263.094	198.215	190.870	
	V-THET-BAR	460.391	454.390	451.986	424.145	410.081	399.778	399.090	
	MACH-BAR	0.467	0.498	0.513	0.493	0.433	0.394	0.390	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.563	16.979	17.322	17.271	16.834	16.626	16.575	17.019
ROTOR PLUS STATOR	T-TOTAL	547.23	547.64	548.68	547.22	547.41	546.98	551.12	548.01
	P-STATIC	15.880	15.885	15.888	15.878	15.860	15.845	15.837	
PR = 1.1640	BETABAR	16.151	16.558	16.850	16.719	15.889	13.298	9.615	
TR = 1.0565	EPSILON	0.450	-0.085	-0.704	-1.280	-1.716	-3.521	-5.489	
EFF-A = 0.7848	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.7894	V-BAR	260.332	351.770	400.893	395.011	333.219	300.063	292.637	
	VZ-BAR	269.268	337.176	383.682	378.311	320.483	291.998	288.526	
	V-THET-BAR	77.979	100.271	116.204	113.641	91.240	69.031	48.879	
IGV,ROTOR,STATOR	MACH-BAR	0.246	0.310	0.353	0.349	0.293	0.263	0.256	
	EFF-POLY	0.834	0.816	0.773	0.718	0.786	0.808	0.689	
PR = 1.1582	INCID-M	5.8	1.9	1.1	-0.3	5.8	10.0	9.7	
TR = 1.0565	DEVIATION	15.4	15.2	16.0	16.4	16.5	15.3	12.6	
EFF-A = 0.7602	OMEGA-BAR	0.126	0.121	0.126	0.141	0.134	0.134	0.183	
EFF-P = 0.7635	LOSS PAR	0.043	0.042	0.046	0.054	0.053	0.056	0.080	
	D-FACTOR	0.724	0.599	0.525	0.519	0.604	0.655	0.693	
	TURNING	45.3	38.0	35.1	33.5	41.4	50.3	54.8	

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Table C-6. Scaled Stage with IGV-20 Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 100)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 1.745	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24173.0	P-STATIC	14.407	14.408	14.410	14.413	14.417	14.423	14.427	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-1.135	-2.795	-4.263	-5.886	-7.335	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	187.166	187.053	186.447	185.431	183.853	181.784	180.559	
	VZ-BAR	187.166	187.053	186.447	185.431	183.853	181.784	180.559	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.168	0.168	0.167	0.167	0.165	0.163	0.162	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.637	14.624	14.604	14.648	14.645	14.635	14.628	14.632
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.151	14.159	14.174	14.191	14.207	14.221	14.227	
	BETABAR	27.779	28.770	30.619	30.383	29.442	27.591	24.855	
	EPSILON	-0.000	-1.097	-2.710	-4.176	-5.805	-7.320	-8.118	
	K-BAR	0.980	0.980	0.980	0.980	0.979	0.979	0.980	
	V-BAR	244.447	239.295	230.065	236.953	232.049	225.388	221.920	
	VZ-BAR	216.275	209.756	197.987	204.411	202.079	199.751	201.365	
	V-THET-BAR	113.928	115.166	117.180	119.845	114.063	104.392	93.276	
	MACH-BAR	0.220	0.215	0.207	0.213	0.209	0.203	0.200	
	INCID-M	2.3	3.1	4.7	6.3	7.7	9.0	9.6	
	DEVIATION	-5.3	-5.0	-4.5	-6.1	-6.4	-11.6	-15.1	
	OMEGABAR	0.201	0.246	0.318	0.166	0.178	0.221	0.249	
	TURNING	-27.6	-28.8	-30.6	-30.4	-29.4	-27.6	-24.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.637	14.624	14.604	14.648	14.645	14.635	14.628	14.632
WCOR= 1.753	T-TOTAL	518.79	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24173.0	P-STATIC	13.954	13.961	13.975	13.990	14.006	14.019	14.020	
	BETABAR	23.051	23.865	25.338	25.642	24.924	23.330	20.955	
	EPSILON	-1.170	-2.227	-4.694	-7.076	-9.052	-9.464	-8.637	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	290.740	286.365	279.101	285.096	280.924	275.786	274.065	
	VZ-BAR	267.227	261.882	252.251	257.019	254.760	253.234	255.939	
	V-THET-BAR	113.638	115.853	119.442	123.374	118.388	109.217	98.014	
	MACH-BAR	0.262	0.258	0.252	0.257	0.253	0.248	0.247	
	U-WHEEL	529.695	545.462	576.998	608.535	640.073	671.609	687.377	
	V-BAR-PR	494.477	503.142	522.486	549.038	560.571	616.776	642.537	
	BETABAR-PR	57.246	58.633	61.131	62.086	63.970	65.758	66.526	
	V-THET-R-P	-415.657	-429.608	-457.556	-485.161	-521.684	-562.391	-589.364	
	MACH-BAR-P	0.446	0.454	0.471	0.495	0.523	0.556	0.579	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	17.456	17.554	17.654	17.570	17.380	17.253	17.192	17.510
ROTOR	T-TOTAL	549.76	549.54	550.05	549.75	551.58	554.63	557.05	550.72
PR = 1.1967	P-STATIC	14.703	14.793	14.973	15.130	15.268	15.407	15.479	
TR = 1.0617	BETABAR	57.021	55.392	55.767	56.260	61.822	70.063	81.360	
EFF-A = 0.8574	EPSILON	-2.885	-2.389	-3.789	-5.703	-7.172	-7.123	-6.418	
EFF-P = 0.8564	K-BAR	1.000	1.000	1.000	1.000	0.999	1.000	1.000	
	V-BAR	562.212	561.252	551.164	525.576	490.701	460.484	444.637	
	VZ-BAR	306.031	318.763	310.063	291.934	231.735	157.038	66.641	
	V-THET-BAR	471.621	461.945	455.677	437.032	432.490	432.547	439.615	
	MACH-BAR	0.501	0.500	0.491	0.467	0.434	0.405	0.396	
	U-WHEEL	523.472	538.827	569.541	600.256	630.970	661.684	677.041	
	V-BAR-PR	310.393	327.921	330.327	334.523	305.205	278.254	246.601	
	BETABAR-PR	9.616	13.558	20.165	29.215	40.595	55.662	74.322	
	V-THET-R-P	-51.850	-76.882	-113.864	-163.223	-198.480	-224.137	-237.426	
	MACH-BAR-P	0.277	0.292	0.294	0.297	0.270	0.245	0.216	
	D-FACTOR	0.623	0.594	0.613	0.626	0.707	0.784	0.852	
	TURNING	47.6	45.1	41.0	32.9	23.4	10.1	-7.8	
	INCID-M	-0.1	2.5	5.9	6.5	7.1	7.1	6.7	
	DEVIATION	21.5	17.3	11.6	11.5	15.4	24.4	40.5	
	OMEGABAR-P	0.211	0.143	0.112	0.130	0.232	0.336	0.412	
	LOSS PAR	0.073	0.050	0.040	0.046	0.075	0.084	0.090	
	PT-RATIO	1.195	1.201	1.208	1.199	1.187	1.179	1.175	1.1967
	EFF-AD	0.862	0.903	0.918	0.892	0.794	0.697	0.659	0.8574
	EFF-POLY	0.865	0.905	0.919	0.893	0.798	0.703	0.647	0.8564
STATOR LEADING EDGE	DIAMETER	4.956	5.096	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	17.456	17.551	17.653	17.580	17.390	17.259	17.192	17.510
	T-TOTAL	549.76	549.54	550.05	549.69	551.44	554.44	557.05	550.72
	P-STATIC	14.695	14.767	14.938	15.106	15.243	15.380	15.452	
	BETABAR	57.015	55.137	55.367	55.958	61.264	69.201	81.033	
	EPSILON	-0.113	-1.059	-2.880	-4.096	-5.080	-6.770	-7.974	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	563.045	563.851	554.922	529.228	494.796	464.556	448.267	
	VZ-BAR	306.536	322.303	315.375	296.270	237.915	164.982	69.873	
	V-THET-BAR	472.288	462.653	456.592	438.520	433.782	434.202	442.788	
	MACH-BAR	0.502	0.503	0.494	0.470	0.438	0.409	0.393	
STATOR TRAILING EDGE	DIAMETER	4.964	5.099	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	16.942	17.242	17.372	17.198	17.059	17.017	16.692	17.171
ROTOR PLUS STATOR	T-TOTAL	549.78	549.54	550.00	549.69	550.59	553.36	557.05	550.72
PR = 1.1735	P-STATIC	16.152	16.154	16.156	16.152	16.146	16.136	16.131	
TR = 1.0617	BETABAR	16.000	16.511	16.860	16.817	15.937	15.308	9.912	
EFF-A = 0.7577	EPSILON	0.450	0.378	-0.115	-0.589	-1.013	-2.879	-5.489	
EFF-P = 0.7632	K-BAR	0.870	0.870	0.870	0.870	0.870	0.870	0.870	
	V-BAR	299.222	348.885	368.230	342.627	321.181	316.475	255.136	
	VZ-BAR	287.630	334.494	352.402	327.975	308.837	307.960	251.326	
	V-THET-BAR	82.479	99.165	106.800	99.126	88.188	72.885	43.917	
IGV,ROTOR,STATOR	MACH-BAR	0.262	0.306	0.324	0.301	0.281	0.277	0.222	
	EFF-POLY	0.759	0.833	0.831	0.752	0.805	0.867	0.592	
PR = 1.1685	INCID-M	1.4	2.5	4.5	5.4	9.8	15.6	26.3	
TR = 1.0617	DEVIATION	15.2	15.2	16.0	16.5	16.6	15.3	12.9	
EFF-A = 0.7414	OMEGA-BAR	0.186	0.111	0.104	0.154	0.154	0.129	0.287	
EFF-P = 0.7428	LOSS PAR	0.063	0.039	0.038	0.058	0.061	0.054	0.125	
	D-FACTOR	0.714	0.615	0.578	0.616	0.648	0.660	0.829	
	TURNING	41.0	38.6	38.5	39.1	45.3	55.9	71.1	

Table C-7. Nominal Scaled Stage with Decreased Clearance Blade Element Performance — U.S. Customary Units

(Data Point No. 101)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.280	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24112.0	P-STATIC	14.198	14.199	14.201	14.206	14.214	14.224	14.230	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.603	-4.207	-5.770	-7.284	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	246.658	246.567	245.948	244.694	242.772	240.202	238.620	
	VZ-BAR	246.658	246.567	245.948	244.694	242.772	240.202	238.620	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.222	0.222	0.221	0.220	0.218	0.216	0.215	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.674	14.675	14.680	14.691	14.691	14.691	14.692	14.686
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.085	14.090	14.094	14.100	14.108	14.115	14.119	
	BETABAR	7.228	9.853	11.652	11.990	12.025	9.815	6.062	
	EPSILON	-0.000	-0.879	-2.533	-4.135	-5.714	-7.260	-8.118	
	K-BAR	0.990	0.990	0.990	0.990	0.989	0.989	0.990	
	V-BAR	268.289	268.379	268.538	269.371	267.923	266.117	265.238	
	VZ-BAR	266.157	264.409	263.004	263.494	262.044	262.212	263.755	
	V-THET-BAR	33.757	45.925	54.234	55.957	55.816	45.366	28.010	
	MACH-BAR	0.242	0.242	0.242	0.243	0.241	0.240	0.239	
	INCID-H	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.9	-3.9	-3.5	-4.5	-5.9	-9.4	-13.9	
	OMEGABAR	0.042	0.039	0.029	0.008	0.006	0.006	0.006	
	TURNING	-7.2	-9.9	-11.7	-12.0	-12.0	-9.8	-6.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.674	14.675	14.680	14.691	14.691	14.691	14.692	14.686
WCOR= 2.281	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=24112.0	P-STATIC	13.749	13.753	13.758	13.763	13.769	13.773	13.772	
	BETABAR	5.713	7.877	9.411	9.786	9.867	8.069	4.999	
	EPSILON	-1.170	-2.000	-3.738	-5.380	-6.838	-7.450	-6.637	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	338.830	338.368	338.333	339.138	338.188	337.432	337.764	
	VZ-BAR	337.147	335.167	333.779	334.200	333.186	334.084	336.480	
	V-THET-BAR	33.730	46.369	55.320	57.639	57.950	47.364	29.433	
	MACH-BAR	0.306	0.306	0.306	0.307	0.306	0.305	0.305	
	U-WHEEL	528.358	544.085	575.542	606.999	638.457	669.914	685.643	
	V-BAR-PR	598.603	600.050	618.096	643.032	669.332	706.531	737.448	
	BETABAR-PR	55.721	56.043	57.315	58.685	60.145	61.779	62.853	
	V-THET-B-P	-494.628	-497.716	-520.222	-549.360	-580.507	-622.551	-656.230	
	MACH-BAR-P	0.541	0.542	0.559	0.581	0.605	0.639	0.666	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.088	18.222	18.247	18.102	17.973	17.633	17.427	18.042
ROTOR	T-TOTAL	553.97	554.06	553.60	552.11	552.96	555.59	557.60	553.60
-----	P-STATIC	15.087	15.163	15.331	15.477	15.596	15.706	15.764	
PR = 1.2285	BETABAR	49.321	49.394	48.546	47.059	48.662	54.700	59.733	
TR = 1.0673	EPSILON	-2.886	-2.849	-3.700	-5.168	-6.487	-6.845	-6.418	
EFF-A = 0.9031	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9031	V-BAR	579.749	583.442	568.161	538.831	513.588	465.766	434.991	
	VZ-BAR	377.892	379.739	376.135	367.076	339.240	269.227	219.247	
	V-THET-BAR	439.666	442.948	425.828	394.454	385.579	379.953	375.697	
	MACH-BAR	0.516	0.519	0.505	0.478	0.455	0.410	0.381	
	U-WHEEL	522.151	537.468	568.104	598.741	629.377	660.014	675.332	
	V-BAR-PR	386.790	391.330	402.148	420.117	417.813	388.690	371.282	
	BETABAR-PR	12.313	13.977	20.719	29.096	35.709	46.152	53.807	
	V-THET-B-P	-82.485	-98.519	-182.276	-208.288	-243.798	-280.061	-299.635	
	MACH-BAR-P	0.348	0.348	0.357	0.373	0.370	0.342	0.325	
	D-FACTOR	0.590	0.584	0.577	0.557	0.583	0.660	0.705	
	TURNING	43.4	42.1	36.6	29.6	24.4	15.6	9.0	
	INCID-H	-1.7	-0.1	2.0	3.1	3.3	3.1	3.1	
	DEVIATION	24.2	17.7	12.1	11.4	10.5	14.9	20.0	
	OMEGABAR-P	0.114	0.077	0.053	0.045	0.097	0.227	0.304	
	LOSS PAR	0.039	0.027	0.019	0.016	0.033	0.069	0.081	
	PT-RATIO	1.233	1.242	1.243	1.232	1.223	1.200	1.186	1.2285
	EFF-AD	0.907	0.937	0.953	0.955	0.899	0.758	0.667	0.9031
	EFF-POLY	0.909	0.938	0.954	0.956	0.901	0.759	0.675	0.9031
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.088	18.219	18.248	18.105	17.979	17.639	17.427	18.042
	T-TOTAL	553.97	554.06	553.63	552.11	552.91	555.53	557.60	553.60
	P-STATIC	15.094	15.183	15.287	15.419	15.521	15.608	15.659	
	BETABAR	49.487	49.283	48.253	46.582	47.825	53.031	57.423	
	EPSILON	-0.113	-1.136	-3.029	-4.141	-5.070	-6.709	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	579.124	585.300	572.814	545.417	522.714	478.751	449.062	
	VZ-BAR	376.207	381.804	381.403	374.876	350.958	287.969	241.792	
	V-THET-BAR	440.287	443.622	427.371	396.166	387.358	382.377	378.409	
	MACH-BAR	0.515	0.521	0.509	0.484	0.463	0.422	0.394	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	17.778	18.035	18.008	17.877	17.765	17.477	17.153	17.821
ROTOR PLUS STATOR	T-TOTAL	553.97	554.06	553.64	552.15	552.75	555.27	557.60	553.60
-----------------	P-STATIC	16.308	16.313	16.304	16.283	16.257	16.227	16.209	
PR = 1.2134	BETABAR	15.677	14.326	12.823	12.524	12.677	11.464	9.412	
TR = 1.0673	EPSILON	0.450	-0.148	-1.225	-2.127	-3.022	-4.373	-5.489	
EFF-A = 0.8446	K-BAR	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
EFF-P = 0.8488	V-BAR	402.607	433.687	431.540	417.980	407.591	374.149	327.812	
	VZ-BAR	387.631	420.202	420.777	407.995	397.654	366.678	323.399	
	V-THET-BAR	108.787	107.293	95.777	90.629	89.450	74.377	53.610	
IGV,ROTOR,STATOR	MACH-BAR	0.353	0.381	0.379	0.368	0.358	0.327	0.285	
----------------	EFF-POLY	0.816	0.878	0.827	0.806	0.806	0.836	0.684	
PR = 1.2127	INCID-H	-6.2	-3.4	-2.6	-3.9	-3.7	-0.6	2.6	
TR = 1.0673	DEVIATION	14.9	13.0	11.9	12.2	13.3	13.4	12.4	
EFF-A = 0.8449	OMEGA-BAR	0.104	0.060	0.081	0.085	0.087	0.080	0.155	
EFF-P = 0.8464	LOSS PAR	0.035	0.021	0.030	0.033	0.035	0.034	0.068	
	D-FACTOR	0.508	0.468	0.469	0.461	0.462	0.505	0.598	
	TURNING	33.8	35.0	35.4	34.1	35.1	41.6	48.0	

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Table C-7. Nominal Scaled Stage with Decreased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 102)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.126	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24246.0	P-STATIC	14.265	14.265	14.268	14.272	14.278	14.287	14.292	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.615	-4.203	-5.768	-7.284	-8.067	
	K-BAR	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
	V-BAR	229.301	229.212	228.620	227.458	225.683	223.297	221.827	
	VZ-BAR	229.301	229.212	228.620	227.458	225.683	223.297	221.827	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.206	0.206	0.206	0.205	0.203	0.201	0.199	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.676	14.678	14.682	14.691	14.691	14.691	14.692	14.687
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	14.211	14.212	14.215	14.220	14.226	14.233	14.236	
	BETABAR	6.886	9.624	11.532	11.971	12.097	9.869	5.908	
	EPSILON	-0.000	-0.879	-2.547	-4.120	-5.702	-7.260	-8.118	
	K-BAR	1.030	1.030	1.030	1.030	1.029	1.029	1.030	
	V-BAR	238.888	239.104	239.225	240.129	238.696	236.980	236.423	
	VZ-BAR	237.165	235.728	234.395	234.907	233.396	233.464	235.167	
	V-THET-BAR	28.642	39.977	47.825	49.807	50.023	40.617	24.335	
	MACH-BAR	0.215	0.215	0.215	0.216	0.215	0.213	0.213	
	INCID-H	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-6.2	-4.1	-3.6	-4.5	-5.8	-9.4	-14.0	
	OMEGABAR	0.042	0.039	0.030	0.009	0.008	0.008	0.006	
	TURNING	-6.9	-9.6	-11.5	-12.0	-12.1	-9.9	-5.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.676	14.678	14.682	14.691	14.691	14.691	14.692	14.687
WCOR= 2.127	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=24246.0	P-STATIC	13.943	13.946	13.950	13.954	13.961	13.966	13.964	
	BETABAR	5.458	7.728	9.338	9.802	9.965	8.153	4.895	
	EPSILON	-1.170	-2.005	-3.969	-6.156	-8.055	-8.896	-6.637	
	K-BAR	1.030	1.030	1.030	1.030	1.030	1.030	1.030	
	V-BAR	300.894	300.639	300.661	301.499	300.172	298.991	299.678	
	VZ-BAR	299.530	297.901	296.677	297.098	295.644	295.962	298.585	
	V-THET-BAR	28.619	40.423	48.783	51.326	51.942	42.400	25.571	
	MACH-BAR	0.271	0.271	0.271	0.272	0.271	0.270	0.270	
	U-WHEEL	531.294	547.109	578.741	610.373	642.005	673.637	689.453	
	V-BAR-PR	585.150	587.772	607.351	633.090	659.988	697.178	727.937	
	BETABAR-PR	59.210	59.547	60.758	62.011	63.387	64.879	65.784	
	V-THET-B-P	-502.675	-506.685	-529.958	-559.047	-590.063	-631.237	-663.882	
	MACH-BAR-P	0.528	0.530	0.548	0.571	0.595	0.629	0.657	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	18.088	18.315	18.466	18.411	18.193	17.716	17.427	18.259
ROTOR	T-TOTAL	553.97	554.08	554.32	553.42	554.14	557.00	559.16	554.39
-----	P-STATIC	15.369	15.447	15.623	15.769	15.881	15.987	16.043	
PR = 1.2433	BETABAR	51.784	50.662	49.685	48.201	50.512	60.449	75.542	
TR = 1.0688	EPSILON	-2.885	-2.601	-3.655	-5.589	-7.080	-7.225	-6.418	
EFF-A = 0.9360	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9349	V-BAR	550.161	562.203	557.378	536.546	503.584	439.795	396.234	
	VZ-BAR	340.344	356.381	360.616	357.621	320.263	216.974	98.926	
	V-THET-BAR	432.253	434.815	424.998	399.985	388.589	382.419	383.686	
	MACH-BAR	0.488	0.499	0.495	0.476	0.445	0.386	0.346	
	U-WHEEL	525.052	540.455	571.261	602.068	632.875	663.682	679.085	
	V-BAR-PR	352.769	371.711	389.174	410.793	402.866	355.400	311.524	
	BETABAR-PR	15.252	16.510	22.073	29.468	37.344	52.378	71.485	
	V-THET-B-P	-92.799	-105.640	-146.263	-202.083	-248.286	-281.263	-295.400	
	MACH-BAR-P	0.313	0.330	0.345	0.364	0.356	0.312	0.272	
	D-FACTOR	0.637	0.607	0.595	0.574	0.609	0.712	0.791	
	TURNING	44.0	43.0	38.7	32.5	26.0	12.5	-5.7	
	INCID-H	1.8	3.8	5.5	6.5	6.5	6.2	6.0	
	DEVIATION	27.1	20.2	13.5	11.8	12.2	21.2	37.6	
	OMEGABAR-P	0.120	0.054	0.016	0.005	0.077	0.245	0.347	
	LOSS PAR	0.041	0.019	0.006	0.002	0.026	0.066	0.049	
	PT-RATIO	1.232	1.248	1.258	1.253	1.238	1.206	1.186	1.2433
	EFF-AD	0.906	0.958	0.987	0.996	0.923	0.745	0.641	0.9360
	EFF-POLY	0.908	0.959	0.986	0.995	0.925	0.751	0.649	0.9349
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	18.088	18.310	18.466	18.416	18.210	17.735	17.427	18.259
	T-TOTAL	553.97	554.07	554.34	553.44	554.05	556.87	559.16	554.39
	P-STATIC	15.375	15.432	15.586	15.730	15.838	15.937	15.993	
	BETABAR	51.972	50.605	49.474	47.952	49.915	59.108	73.311	
	EPSILON	-0.113	-1.170	-3.423	-4.271	-5.236	-6.697	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	549.524	563.396	561.129	541.122	510.104	448.516	403.449	
	VZ-BAR	338.534	357.573	364.617	362.420	328.471	230.402	115.859	
	V-THET-BAR	432.864	435.378	426.519	401.827	390.262	384.576	386.455	
	MACH-BAR	0.487	0.500	0.498	0.480	0.451	0.394	0.352	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	17.847	18.076	18.142	18.017	17.816	17.571	17.153	17.916
ROTOR PLUS STATOR	T-TOTAL	553.97	554.07	554.36	553.51	553.75	556.06	559.16	554.39
----------	P-STATIC	16.541	16.545	16.538	16.520	16.499	16.475	16.463	
PR = 1.2199	BETABAR	15.031	14.808	13.329	13.299	13.078	12.316	11.208	
TR = 1.0688	EPSILON	0.450	-0.185	-0.976	-1.503	-2.088	-3.318	-5.489	
EFF-A = 0.8491	K-BAR	0.890	0.890	0.890	0.890	0.890	0.890	0.890	
EFF-P = 0.8533	V-BAR	378.169	407.697	417.020	403.457	380.034	348.850	279.893	
	VZ-BAR	365.230	394.157	405.785	392.637	370.178	340.816	274.556	
	V-THET-BAR	98.076	104.195	96.142	92.806	85.991	74.431	54.401	
IGV,ROTOR,STATOR	MACH-BAR	0.331	0.358	0.366	0.354	0.333	0.305	0.243	
----------	EFF-POLY	0.844	0.883	0.768	0.686	0.671	0.887	0.645	
PR = 1.2192	INCID-H	-3.7	-2.0	-1.4	-2.6	-1.6	5.5	18.5	
TR = 1.0688	DEVIATION	14.3	13.5	12.4	12.9	13.7	14.3	14.1	
EFF-A = 0.8497	OMEGA-BAR	0.089	0.081	0.112	0.149	0.166	0.091	0.191	
EFF-P = 0.8511	LOSS PAR	0.030	0.029	0.042	0.057	0.067	0.038	0.083	
	D-FACTOR	0.528	0.490	0.483	0.487	0.512	0.541	0.675	
	TURNING	36.9	35.8	36.1	34.7	36.8	46.8	62.1	

Table C-7. Nominal Scaled Stage with Decreased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 103)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.958	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29247.0	P-STATIC	13.872	13.873	13.877	13.886	13.899	13.916	13.927	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.593	-4.200	-5.757	-7.284	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	318.898	318.775	317.910	316.192	313.586	310.067	307.916	
	VZ-BAR	318.898	318.775	317.910	316.192	313.586	310.067	307.916	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.001	0.000	0.000	
	MACH-BAR	0.288	0.288	0.287	0.285	0.283	0.280	0.278	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.657	14.660	14.670	14.687	14.688	14.687	14.686	14.679
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.704	13.706	13.713	13.723	13.734	13.747	13.754	
	BETABAR	8.195	10.057	11.702	12.065	11.895	9.659	5.882	
	EPSILON	-0.000	-0.879	-2.511	-4.130	-5.694	-7.260	-8.118	
	K-BAR	1.020	1.020	1.020	1.020	1.019	1.019	1.020	
	V-BAR	344.303	344.440	344.923	346.004	344.121	341.586	340.073	
	VZ-BAR	340.787	339.140	337.754	338.361	336.732	336.731	338.282	
	V-THET-BAR	49.079	60.144	69.955	72.322	70.929	57.315	34.848	
	MACH-BAR	0.311	0.311	0.312	0.313	0.311	0.309	0.307	
	INCID-M	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-4.9	-3.7	-3.4	-4.4	-6.0	-9.6	-14.0	
	OMEGABAR	0.045	0.042	0.030	0.009	0.008	0.009	0.011	
	TURNING	-8.2	-10.1	-11.7	-12.1	-11.9	-9.7	-5.9	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.657	14.660	14.670	14.687	14.688	14.687	14.686	14.679
WCOR= 2.961	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
WCOR=29247.0	P-STATIC	13.125	13.130	13.136	13.142	13.148	13.155	13.152	
	BETABAR	6.400	7.935	9.333	9.713	9.621	7.825	4.777	
	EPSILON	-1.170	-1.844	-3.473	-5.139	-6.666	-7.546	-6.637	
	K-BAR	1.020	1.020	1.020	1.020	1.020	1.020	1.020	
	V-BAR	439.952	439.449	439.986	441.431	440.559	439.485	439.687	
	VZ-BAR	437.210	435.236	434.161	435.104	434.363	435.384	438.159	
	V-THET-BAR	49.040	60.667	71.357	74.472	73.628	59.835	36.618	
	MACH-BAR	0.400	0.400	0.400	0.402	0.401	0.400	0.400	
	U-WHEEL	640.880	659.956	698.112	736.269	774.426	812.582	831.660	
	V-BAR-PR	735.817	740.661	762.446	792.021	824.497	869.595	907.786	
	BETABAR-PR	53.546	54.011	55.288	56.676	58.208	59.954	61.140	
	V-THET-B-P	-591.839	-599.288	-626.756	-661.797	-700.797	-752.747	-795.042	
	MACH-BAR-P	0.669	0.674	0.694	0.721	0.750	0.791	0.826	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.411	19.713	20.007	19.927	19.874	19.218	18.720	19.761
ROTOR	T-TOTAL	570.31	570.14	569.99	570.29	570.89	574.67	577.31	571.11
PR = 1.3462	P-STATIC	15.071	15.192	15.452	15.681	15.886	16.056	16.140	
TR = 1.1010	BETABAR	51.222	49.838	48.182	48.348	48.087	54.026	60.505	
EFF-A = 0.8799	EPSILON	-2.885	-2.251	-3.260	-4.622	-6.208	-6.865	-6.418	
EFF-P = 0.8823	K-BAR	0.990	0.990	0.990	0.990	0.989	0.990	0.990	
	V-BAR	691.343	700.951	698.003	673.321	651.957	587.778	536.377	
	VZ-BAR	432.990	452.081	465.401	447.492	435.521	385.416	264.085	
	V-THET-BAR	538.958	535.673	520.201	503.101	485.132	475.377	466.862	
	MACH-BAR	0.612	0.621	0.619	0.595	0.575	0.513	0.465	
	U-WHEEL	633.350	651.929	689.090	726.251	763.412	800.573	819.154	
	V-BAR-PR	443.159	466.805	495.120	500.053	516.888	474.760	440.285	
	BETABAR-PR	12.298	14.417	19.944	26.503	32.581	43.312	53.744	
	V-THET-B-P	-94.393	-116.255	-168.889	-223.150	-278.281	-325.796	-352.292	
	MACH-BAR-P	0.392	0.414	0.439	0.442	0.456	0.414	0.382	
	D-FACTOR	0.629	0.599	0.573	0.585	0.584	0.669	0.726	
	TURNING	41.2	39.6	35.3	30.2	25.6	16.6	8.0	
	INCID-S	-3.8	-2.1	0.0	1.1	1.3	1.3	1.4	
	DEVIATION	24.2	18.2	11.3	8.8	7.4	12.1	19.3	
	OMEGABAR-P	0.190	0.129	0.070	0.088	0.101	0.285	0.339	
	LOSS PAR	0.065	0.045	0.025	0.032	0.036	0.078	0.091	
	PT-RATIO	1.324	1.345	1.364	1.357	1.353	1.309	1.275	1.3462
	EFF-AD	0.840	0.891	0.938	0.916	0.897	0.741	0.636	0.8799
	EFF-POLY	0.846	0.895	0.940	0.919	0.901	0.750	0.648	0.8823
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.411	19.706	20.004	19.929	19.886	19.236	18.720	19.761
	T-TOTAL	570.31	570.15	569.99	570.29	570.81	574.57	577.31	571.11
	P-STATIC	15.081	15.166	15.378	15.585	15.772	15.927	16.013	
	BETABAR	51.415	49.783	47.816	47.821	47.334	52.693	58.720	
	EPSILON	-0.113	-1.389	-2.698	-3.958	-4.928	-6.415	-7.979	
	K-BAR	0.990	0.990	0.990	0.990	0.990	0.990	0.990	
	V-BAR	690.456	702.652	704.075	681.720	662.838	601.866	550.209	
	VZ-BAR	430.620	453.689	472.793	457.737	449.229	364.901	285.679	
	V-THET-BAR	539.719	536.535	521.714	505.193	487.378	478.475	470.231	
	MACH-BAR	0.611	0.623	0.625	0.603	0.585	0.526	0.478	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.383	5.595	5.847	6.100	6.226	
	P-TOTAL	19.201	19.462	19.733	19.733	19.673	19.117	18.576	19.532
ROTOR PLUS STATOR	T-TOTAL	570.31	570.15	569.99	570.26	570.63	574.08	577.31	571.11
PR = 1.3306	P-STATIC	17.069	17.074	17.067	17.042	17.005	16.956	16.929	
TR = 1.1010	BETABAR	14.994	13.962	12.364	12.350	12.833	12.076	10.137	
EFF-A = 0.8415	EPSILON	0.450	-0.084	-1.023	-1.990	-2.951	-4.166	-5.489	
EFF-P = 0.8478	K-BAR	0.920	0.920	0.920	0.920	0.920	0.920	0.920	
	V-BAR	476.034	501.423	527.393	530.100	528.767	482.092	426.171	
	VZ-BAR	459.826	486.609	515.162	517.832	515.559	471.423	419.519	
IGV,ROTOR,STATOR	V-THET-BAR	123.159	120.961	112.919	113.382	117.445	100.861	75.007	
	MACH-BAR	0.414	0.436	0.460	0.462	0.461	0.418	0.367	
PR = 1.3292	EFF-POLY	0.918	0.903	0.883	0.900	0.885	0.950	0.877	
TR = 1.1010	INCID-M	-4.2	-2.9	-3.0	-2.7	-4.2	-0.9	3.9	
EFF-A = 0.8408	DEVIATION	14.2	12.7	11.5	12.0	13.5	14.1	13.1	
EFF-P = 0.8447	OMEGA-BAR	0.048	0.054	0.059	0.065	0.052	0.036	0.053	
	LOSS PAR	0.017	0.019	0.022	0.018	0.021	0.015	0.023	
	D-FACTOR	0.524	0.501	0.474	0.455	0.439	0.482	0.548	
	TURNING	36.4	35.8	35.5	35.5	34.5	40.6	48.6	

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Table C-7. Nominal Scaled Stage with Decreased Clearance Blade Element Performance — U.S. Customary Units (Continued)

(Data Point No. 104)

STATION DESCRIPTION	PARAMETER	PERCENT OF SPAN 100	90	70	50	30	10	0	MASS AVG
IGV LEADING EDGE	DIAMETER	5.018	5.214	5.606	5.998	6.391	6.783	6.979	
	P-TOTAL	14.694	14.694	14.694	14.694	14.694	14.694	14.694	14.694
WCOR= 2.684	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29241.0	P-STATIC	14.025	14.026	14.029	14.036	14.047	14.061	14.070	
	BETABAR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	EPSILON	-0.000	-0.909	-2.584	-4.207	-5.757	-7.288	-8.067	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	287.143	287.021	286.254	284.699	282.362	279.201	277.272	
	VZ-BAR	287.143	287.021	286.254	284.699	282.362	279.201	277.272	
	V-THET-BAR	0.000	0.001	0.000	0.000	0.000	0.000	0.000	
	MACH-BAR	0.259	0.259	0.258	0.257	0.254	0.252	0.250	
IGV TRAILING EDGE	DIAMETER	5.018	5.201	5.567	5.933	6.299	6.665	6.848	
	P-TOTAL	14.665	14.667	14.675	14.690	14.691	14.691	14.689	14.683
	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
	P-STATIC	13.858	13.859	13.865	13.878	13.884	13.895	13.900	
	BETABAR	7.839	10.030	11.693	12.036	11.954	9.729	6.076	
	EPSILON	-0.000	-0.879	-2.529	-4.135	-5.694	-7.282	-8.118	
	K-BAR	1.000	1.000	1.000	1.000	0.999	0.999	1.000	
	V-BAR	316.261	316.284	316.740	317.680	315.968	313.724	312.350	
	VZ-BAR	313.307	311.441	310.167	310.696	309.116	309.201	310.595	
	V-THET-BAR	43.133	55.083	64.192	66.244	65.442	53.018	33.063	
	MACH-BAR	0.285	0.286	0.286	0.287	0.285	0.283	0.282	
	INCID-R	22.3	23.1	24.7	26.3	27.7	29.0	29.6	
	DEVIATION	-5.2	-3.7	-3.4	-4.5	-5.9	-9.5	-13.8	
	OMEGABAR	0.044	0.042	0.029	0.008	0.005	0.006	0.008	
	TURNING	-7.8	-10.0	-11.7	-12.0	-12.0	-9.7	-6.1	
ROTOR LEADING EDGE	DIAMETER	5.022	5.172	5.470	5.769	6.068	6.367	6.517	
	P-TOTAL	14.665	14.667	14.676	14.690	14.691	14.691	14.689	14.683
WCOR= 2.686	T-TOTAL	518.70	518.70	518.70	518.70	518.70	518.70	518.70	518.70
NCOR=29241.0	P-STATIC	13.373	13.378	13.384	13.392	13.401	13.408	13.405	
	BETABAR	6.147	7.949	9.366	9.743	9.732	7.939	4.971	
	EPSILON	-1.170	-1.916	-3.734	-5.649	-7.286	-7.742	-6.637	
	K-BAR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
	V-BAR	402.510	401.971	402.299	403.180	401.893	400.775	400.953	
	VZ-BAR	400.196	398.102	396.936	397.366	396.109	396.926	399.445	
	V-THET-BAR	43.099	55.585	65.471	68.226	67.936	55.354	34.743	
	MACH-BAR	0.365	0.365	0.365	0.366	0.365	0.364	0.364	
	U-WHEEL	640.748	659.821	697.969	736.118	774.267	812.416	831.490	
	V-BAR-PR	719.264	723.594	746.738	777.165	809.822	858.810	891.270	
	BETABAR-PR	56.193	56.621	57.888	59.248	60.715	62.331	63.373	
	V-THET-R-P	-597.649	-604.236	-632.498	-667.892	-706.331	-757.062	-796.747	
	MACH-BAR-P	0.653	0.657	0.678	0.705	0.735	0.775	0.809	
ROTOR TRAILING EDGE	DIAMETER	4.963	5.109	5.400	5.691	5.982	6.273	6.419	
	P-TOTAL	19.866	20.153	20.463	20.202	19.876	19.347	19.102	20.033
ROTOR	T-TOTAL	571.61	570.99	570.68	569.04	570.90	574.82	578.09	571.13
-----	P-STATIC	15.516	15.643	15.916	16.143	16.328	16.504	16.593	
PR = 1.3643	BETABAR	52.853	51.123	49.064	48.364	51.558	58.594	64.102	
TR = 1.1011	EPSILON	-2.885	-2.526	-3.613	-5.300	-6.658	-6.968	-6.418	
EFF-A = 0.9213	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
EFF-P = 0.9218	V-BAR	684.236	692.027	689.184	651.435	612.083	553.584	523.351	
	VZ-BAR	413.184	434.353	451.568	432.815	380.565	288.579	228.587	
	V-THET-BAR	545.397	538.730	520.635	486.863	479.353	472.221	470.791	
	MACH-BAR	0.605	0.612	0.610	0.575	0.537	0.482	.0.453	
	U-WHEEL	633.220	651.795	688.949	726.102	763.256	800.409	818.986	
	V-BAR-PR	422.414	448.841	481.919	494.586	474.866	437.337	416.523	
	BETABAR-PR	12.000	14.587	20.442	28.933	36.731	48.704	56.716	
	V-THET-R-P	-87.823	-113.065	-168.314	-239.239	-283.902	-328.188	-348.195	
	MACH-BAR-P	0.373	0.397	0.427	0.457	0.417	0.381	0.361	
	D-FACTOR	0.656	0.618	0.586	0.580	0.629	0.706	0.750	
	TURNING	44.2	42.0	37.4	30.3	24.0	13.6	6.7	
	INCID-R	-1.2	0.5	2.6	3.7	3.8	3.7	3.6	
	DEVIATION	23.9	18.3	11.8	11.3	11.5	17.5	22.9	
	OMEGABAR-P	0.143	0.071	0.007	0.019	0.104	0.237	0.312	
	LOSS PAR	0.049	0.025	0.003	0.007	0.035	0.069	0.077	
	PT-RATIO	1.355	1.374	1.394	1.375	1.353	1.317	1.300	1.3643
	EFF-AD	0.889	0.943	0.994	0.982	0.897	0.757	0.681	0.9213
	EFF-POLY	0.893	0.945	0.994	0.983	0.901	0.766	0.692	0.9218
STATOR LEADING EDGE	DIAMETER	4.956	5.098	5.381	5.665	5.948	6.231	6.373	
	P-TOTAL	19.866	20.147	20.461	20.211	19.890	19.356	19.102	20.033
	T-TOTAL	571.61	570.99	570.70	569.03	570.81	574.72	578.09	571.13
	P-STATIC	15.524	15.619	15.857	16.064	16.232	16.389	16.478	
	BETABAR	53.039	51.077	48.833	47.904	50.738	57.119	62.258	
	EPSILON	-0.113	-1.494	-3.260	-4.278	-5.453	-6.667	-7.979	
	K-BAR	0.950	0.950	0.950	0.950	0.950	0.950	0.950	
	V-BAR	683.525	693.720	693.917	658.868	621.928	566.028	535.776	
	VZ-BAR	410.983	435.851	456.775	441.693	393.619	307.381	249.401	
	V-THET-BAR	546.167	539.691	522.375	488.888	481.480	475.130	474.189	
	MACH-BAR	0.604	0.614	0.614	0.582	0.547	0.493	0.464	
STATOR TRAILING EDGE	DIAMETER	4.964	5.090	5.343	5.595	5.847	6.100	6.226	
	P-TOTAL	19.514	19.778	19.895	19.704	19.466	19.099	18.676	19.579
ROTOR PLUS STATOR	T-TOTAL	571.61	570.99	570.72	569.05	570.83	574.21	578.09	571.13
----------	P-STATIC	17.441	17.445	17.431	17.402	17.367	17.326	17.303	
PR = 1.3334	BETABAR	14.563	13.336	12.616	12.426	12.289	11.395	9.966	
TR = 1.1011	EPSILON	0.850	-0.188	-1.134	-1.922	-2.672	-4.207	-5.489	
EFF-A = 0.8476	K-BAR	0.885	0.885	0.885	0.885	0.885	0.885	0.885	
EFF-P = 0.8537	V-BAR	465.681	491.553	504.085	488.254	468.822	435.716	387.198	
	VZ-BAR	450.720	478.299	491.916	476.817	458.080	426.533	381.355	
	V-THET-BAR	117.090	113.371	110.096	105.060	99.782	85.994	67.011	
IGV,ROTOR,STATOR	MACH-BAR	0.404	0.427	0.439	0.425	0.407	0.376	0.332	
----------	EFF-POLY	0.866	0.855	0.769	0.757	0.777	0.843	0.683	
PR = 1.3324	INCID-R	-2.6	-1.6	-2.0	-2.6	-0.8	3.5	7.5	
TR = 1.1011	DEVIATION	13.8	12.0	11.7	12.1	12.9	13.4	12.9	
EFF-A = 0.8481	OMEGA-BAR	0.081	0.082	0.123	0.122	0.116	0.086	0.162	
EFF-P = 0.8515	LOSS PAR	0.028	0.029	0.046	0.047	0.047	0.037	0.071	
	D-FACTOR	0.541	0.515	0.501	0.496	0.507	0.537	0.618	
	TURNING	38.5	37.7	36.2	35.5	38.4	45.7	52.3	

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